

Employment Projections

by Industry and Occupation 2000-2010

in the
Washington Metropolitan Area
and the
District of Columbia



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Executive Summary

This report presents two sets of employment projections, the first for Washington, D.C. and the second for the Washington, D.C. Primary Metropolitan Statistical Area (PMSA) for the period from 2000 to 2010. The report includes projections for employment by industry and by occupation. A summary of findings includes:

A projected employment growth of one percent per year for the District of Columbia. We are projecting an increase of approximately 69,250 jobs in the District over the ten-year period 2000-2010, or a little less than 7,000 jobs a year on the average, a compounded annual growth rate just under one percent.

A projected employment growth of 1.6 percent per year for the metropolitan area.¹ For the PMSA we are projecting 495,554 new jobs over the decade, or just below 50,000 jobs a year, a compounded annual growth rate of about 1.6 percent. The growth rate is slightly above the U.S. Bureau of Labor Statistics national annual forecast employment growth rate of 1.4 percent.

The service sector has the biggest share of growth in the District and the metropolitan area. In the industry projections, the service sector is projected to have the biggest share of employment growth in both the District and the PMSA. For the District, nearly 72 percent of the jobs are expected to be in this sector. The industries in this sector that are projected to have the biggest share of employment growth are business services, personal supply services, computer and data processing services, health services and hospitals. A similar though less dramatic pattern will occur in the PMSA where more than 58 percent of jobs are forecast in the service sector. Business services, computer and data processing services and health services are also important, but educational services and social services are expected to have a significant share of PMSA employment growth.

Federal government has the second-largest share of growth in the District. Federal government employment is the second most important source of employment growth in the District with an expected increase of nearly 11,000 or 16 percent. Other sectors in the District follow with only finance, insurance and real estate contributing as much as 5 percent of job growth. Even though federal job growth in the PMSA is expected to be more than in the District, it is only 3 percent of total forecast job growth in the area.

Retail trade employment is second in expected job growth in the metropolitan area. Retail is expected to add 66,465 jobs. Nearly half of these are forecast for eating and drinking places. Transportation and construction industry employment should both contribute more than 20,000 new jobs each, less than retail trade but still significant.

Service sector employment is expected to be nearly two-thirds of employment growth in the District and approximately half of the growth in the metropolitan area. Professional, managerial and service occupations will lead growth in the District. The report presents industry employment details to show base year, projected year, base year share, projected change and projected growth rates for employment for the 40, three-digit, industries with the highest projected growth and growth rates for D.C. and the PMSA.

Among the 10 major occupational categories, three contribute 90 percent of the forecast occupational growth in the District: professional, managerial, and service occupations. Professional occupations make up more than 40 percent of expected occupational growth; eight of the computer occupations, lawyers, and registered nurses are the biggest gainers. Managerial occupations, which include among the major gainers management analysts, financial managers, administrative service managers and budget analysts, contribute 29 percent of new jobs. Service occupations, which include janitors, maids, cleaners, police and security guards, contribute another 22 percent. The remaining seven occupational groups – sales, office, construction, transport, installation, production and farm – account for the remaining 10 percent of projected District job growth.

¹ The growth rate in total employment in total non-agricultural employment is 2.4 percent, higher than the figure above because the projections define total employment differently. In particular total employment in Table 1 below includes agriculture other than agricultural services, forestry and fishing, self-employed, unpaid family workers, and private household workers and excludes non-classifiable workers.

Executive Summary (cont.)

In the metropolitan area, employment increases are biggest in professional occupations, then service and managerial occupations. The same three occupational categories dominate the forecast increase in employment with 73 percent of job growth, but in different proportions. Professional occupations are still the biggest source of forecast job growth with nearly 40 percent, but unlike the District, service occupations are second with 18 percent and managerial occupations are third with 15 percent. Even though both sales and office occupations will have a declining share of total employment, they each contribute more than 5 percent of job growth and total more than 14 percent. Only farm is negligible in the PMSA.

More than 22,000 openings each year will be in the District. Annual openings – the sum of job growth and replacements when someone leaves a job – are projected to be 22,398, with 53.4 percent in the top 40 occupations in the District of Columbia. When we sort the top forty into major occupational groups, the biggest share is in management occupations; service occupations are second, and professional occupations a close third. Management analysts top the list of management occupations. Janitors and cleaners, waiters and waitresses and nurses are highest in service occupations. Computer occupations and lawyers top the list in the professional occupations group.

Annual openings in the metropolitan area will be more than 117,000 annually. Annual openings in the PMSA are projected at 117,788 with 47.8 percent in the top 40 occupations. The biggest share is for professional occupations; service is second, and office third. Computer occupations top the list of professional occupations, with registered nurses next. Lawyers are fifth in the PMSA. Office clerks and customer service representatives top the list of office occupations. Management occupations are fourth and only slightly below office and administrative support. Like the District, general and operations managers and management analysts are at the top for management occupations.

The seven fastest-growing occupations in the District of Columbia are professional – all seven are in computers.² Personal and home care aides top the list of service occupations.

High demand jobs with high growth: Twenty-nine of the District's top 40 occupations by openings are also in the top 40 for growth; in the PMSA there are 30 such occupations. Twenty-two of the District's high growth occupations are in the top 40 fastest growing occupations; in the region there are 13 such occupations.

Jobs in the Washington area have higher skill requirements than the national averages. Washington has more professional and managerial occupations than the national economy: approximately 49 percent of District employment and 41 percent of the region's employment compared with only 29 percent of national employment. The share of jobs requiring post graduate education in the District is more than triple the national average and roughly double the PMSA average. Conversely, jobs with entry level high school skills are a smaller share of D.C. than regional employment and PMSA than national shares. Projected job growth follows this pattern as well.

Significant need for post-secondary training will continue, including health care and computer support. The smaller projected growth in high school general skills employment implies that significant numbers of new jobs will require post secondary training, this is, training beyond high school, but not necessarily leading to a B.A. degree. Growth in employment for associate's degree and post secondary vocational training skill levels will produce annual job openings of nearly 2,000 per year in the District and 11,000 per year in the PMSA. Many of these jobs are in health care. Some are also in computer support occupations.

² The fastest growing occupations are those with the highest rates of growth. We measure growth in terms of average annual growth rates compounded. Because a low base total can produce a high growth rate without being an important source of employment growth, we have limited the fastest growing occupations to those generating 100 or more jobs. High growth rate occupations for the District and the PMSA are important for occupations that have growth over 100 jobs.

Introduction

This report presents two sets of occupational employment projections for the period 2000 to 2010. The first is for Washington, D.C. The second is for the Washington metropolitan area, technically the Washington Primary Metropolitan Statistical Area (PMSA). Each set includes industry employment projections, which are a first step to creating occupational employment projections. Washington, D.C. is the central city for the metropolitan area and it is contained in the PMSA data.



Overview

Forecast for 2000-2010

There is a projected employment growth of one percent per year for the District of Columbia. The service sector, already the largest source of employment in the District among all the industry groups, is forecast to grow at 1.5 percent per year and accounts for 71.6 percent of the net employment growth. Wholesale trade and manufacturing are forecast to decline. Federal government employment has increased recently, reversing an earlier trend, and is expected to grow further. Not surprisingly, service occupations, as well as professional occupations are also forecast for the biggest employment increases, both in absolute number and percentage change.

We are projecting metropolitan total employment growth to 2010 at 1.6 percent per year.³ Like the District, the PMSA service sector is the largest source of employment, the largest forecasted growth and the fastest rate of growth. Construction and manufacturing are significant sources of PMSA forecasted employment growth through 2010. Even though growth is expected to be concentrated in professional and service occupations, sales, installation and construction occupations are expected to grow at much faster rates in the outlying areas than in the District of Columbia.

By comparison:⁴ Employment in the District declined every year from 1990 to 1998 before staging a modest increase in 1999 and subsequent years. The decrease in District employment during the 1990s was the result of first the 1990-1991 recession and then the District's fiscal crisis in the mid-nineties which caused many organizations to reconsider the desirability of their location in the District. The average annual decrease for the period 1990 to 2000 is just over 0.5 percent per year. The metropolitan area as a whole presented a more upbeat picture. While employment in the PMSA did decline in the 1990-1991 recession, the 1990-2000 decade showed average annual compound employment growth of 2.1 percent. Employment growth in the PMSA has continued into the early years of the 2000-2010 decade, although at more modest rates.

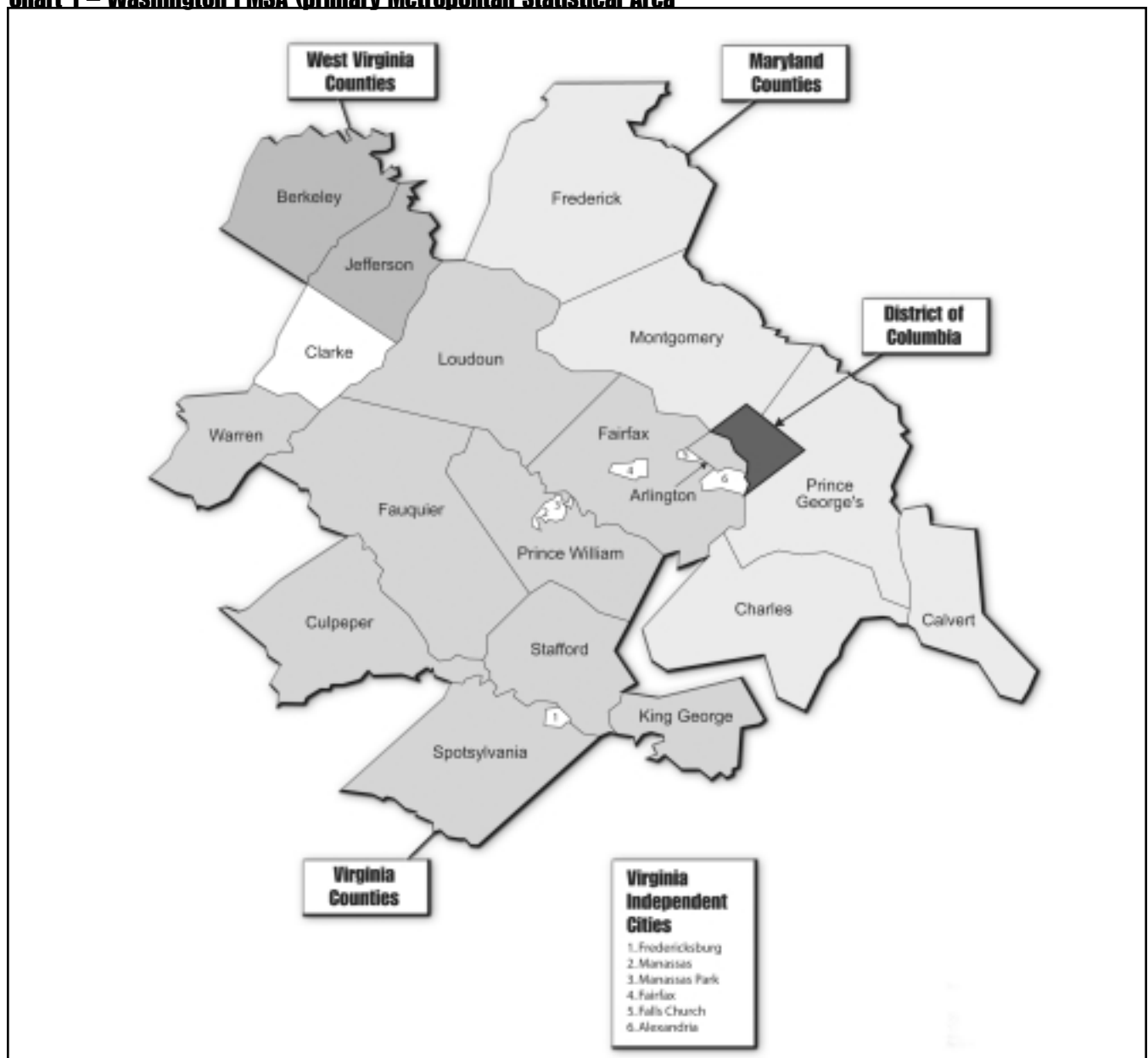
³ The growth rate in total employment in total non-agricultural employment is 2.4 percent, higher than the figure above because the projections define total employment differently. In particular total employment in Table 1 below includes agriculture other than agricultural services, forestry and fishing, self-employed, unpaid family workers, and private household workers and excludes non-classifiable workers.

⁴ For the purposes of the introduction, "employment" is total non-agricultural employment

The Washington Metropolitan Area

The Washington metropolitan area, technically the Washington Primary Metropolitan Statistical Area or PMSA, includes the District of Columbia, six independent cities in Virginia, 11 counties in Virginia, five counties in Maryland, and two counties in West Virginia. **Chart 1** (pg. 2) is a map of the PMSA showing all component jurisdictions.⁵ Outlying counties such as Berkeley and Jefferson in West Virginia are included in the PMSA because they are economically linked to the District and the core by commuting patterns. PMSA population is 4.8 million.

Chart 1 – Washington PMSA (primary Metropolitan Statistical Area)



⁵ This map was produced by GreenInfo Network in San Francisco for Job Trends Associates.

Industry Projections 2000-2010

The Distribution of Employment by Major Industry in 2000¹

Table 7 (pg. 1) and **Chart 2** (pg. 4) show the distribution of employment by major industry for the District of Columbia, the Washington Primary Metropolitan Statistical Area (PMSA) and the United States.⁶ The percents represent the share of total employment of 680,042 for the District, 2,979,463 for the metropolitan area, and 145,594,000 for the United States.

There are large differences in the distribution of employment by industry. Manufacturing employment is only 1.52 percent of District employment and 3.39 percent of the PMSA, but 12.69 percent for the United States.

The percentages reverse direction for service sector employment, which is 45.05 percent of District employment, but declines to 41.50 percent for the PMSA, and 27.02 percent for the United States.

Federal employment in the District has declined in recent years, but remains at 25.9 percent of District employment by industry.

More details appear in **Exhibit 1** (pg. 5).

⁶ Employment includes wage and salary employment in industries covered by Social Security, presumed non-covered employment (e.g. railroad, education, health, religious and other workers not covered by Social Security) self-employed, unpaid family workers, and employees in private households. Federal data include wage and salary workers from the Bureau of Labor Statistics Current Employment Statistics survey, and self employed, unpaid family workers, agricultural, and private household data from the Current Population Survey. Non-classifiable workers are excluded.



Industry Projections 2000-2010 (cont)

Exhibit 1-Employment Shares by Major Industry from Table 1

Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing have declined to only 2.42 percent nationally. In the District and Washington PMSA these industries and their employment are miniscule.
Mining	Mining is even smaller than Agriculture, Forestry and Fishing. In the District around 40 jobs exist mostly as industry representatives.
Construction	The District has no undeveloped land and firms . The surrounding jurisdictions can easily bid for replacement construction in the District. The result is that District construction industry employment is 1.61 percent while the PMSA and the United States are around 5 percent.
Manufacturing	More than half of District manufacturing employment is in printing and publishing. It is 1.67 percent of industry employment compared to 3.39 percent in the PMSA and 12.69 percent nationally.
Transportation, Communications and Public Utilities	The District's transportation, communications and public utility employment is nearly a full percent below the 4.82 percent national amount. For the PMSA it is approximately 0.5 percent higher.
Trade	Both wholesale and retail trade shares are much smaller in the District than shares in the United States. Locally, wholesale trade is now mostly in the surrounding jurisdictions and 2.85 percent of employment compared to 4.82 percent nationally. D.C. retail trade is 6.78 percent compared to 16.01 percent nationally. The PMSA figures are also below the national figures at 13.77 percent retail trade.
Finance, Insurance and Real Estate	The District, the Washington PMSA and national shares of industry employment are all approximately 5 percent.
Services	Service industry employment is 45.05 percent of District industry employment and 41.50 percent of Washington PMSA employment. Services are 27.2 percent of national employment. Washington has a high level of legal and management services, raising this share.
Federal Government	The District of Columbia has lost federal government jobs in recent years but still has 25.86 percent of its jobs in the federal government. It is higher than any state. PMSA federal employment is 10.41 percent, more than 10 times the national average.
State and Local Government	State and local government is 12.30 percent of industry employment nationally, but only 3.73 percent in the District and 4.04 percent in the Washington, D.C. PMSA. Since both Maryland and Virginia state governments are in other regions state employment is low in the PMSA.

Industry Projections 2000-2010 (cont.)

2000-2010 Projections by Major Industry

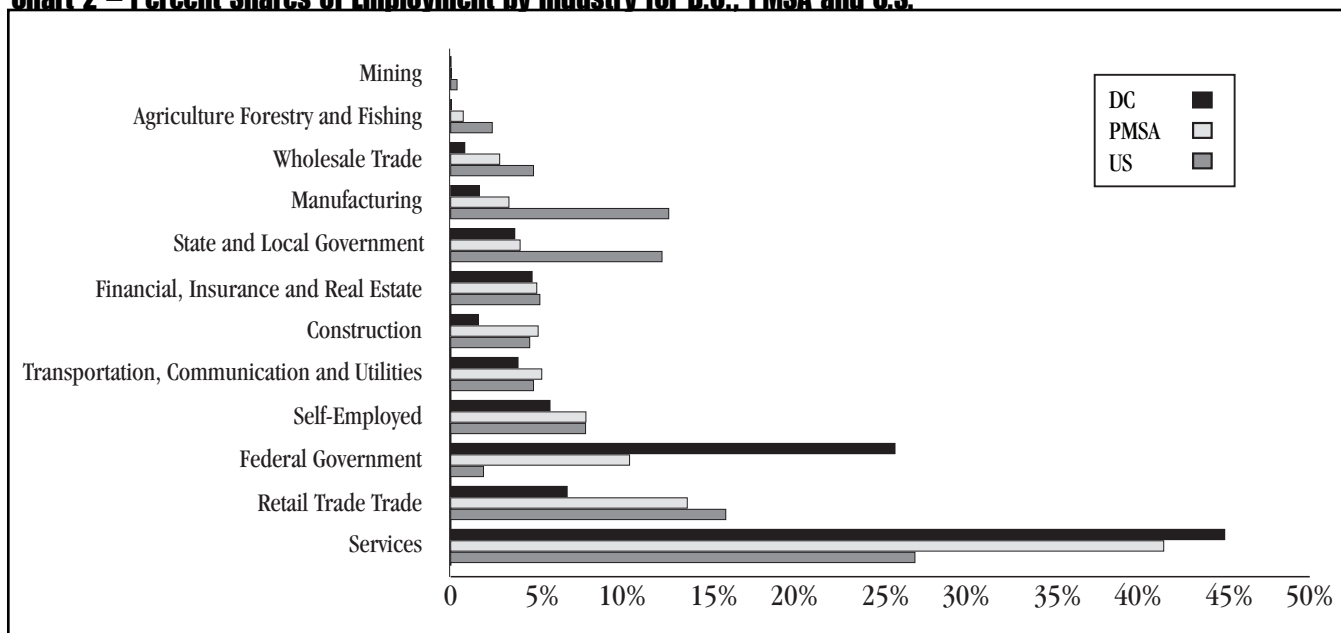
Projected employment growth is not evenly distributed among major industries. **Table 1** (pg. 1), in addition to base year employment and share in total employment, also includes projected growth and annual compounded rate of growth by industry. In the District of Columbia, manufacturing and wholesale employment are forecast to decline further during overall employment growth of nearly one percent per year. Services and government are expected to be the biggest gainers with services being the only industry group expected to have an average annual growth rate above 1 percent a year, apart from Forestry and Fishing which has a small number of jobs in absolute number. In the PMSA services are forecasted to show the highest industry employment

growth and is the only industry group with over 2 percent annual growth, apart from agriculture, forestry and fishing which again is small in absolute number. These are the only industries with more than 2 percent annual growth. Durable goods manufacturing is next with 1.6 percent followed by retail trade with 1.5 percent forecasted annual growth. Five other categories with more than 1 percent share are expected to have more than 1 percent growth rates.

Government employment growth is forecasted to be less than 1 percent. The growth rates for employment by industry in the District and the PMSA are quite different than growth rates in the United States in many instances. More details appear in **Chart 3** (pg. 9) and **Exhibit 2** (pg. 6). Service industry employment in the United States is

projected to grow at 2.9 percent, but only 2.1 percent in the PMSA and 1.5 percent in the District of Columbia. However, since both the District and PMSA had a higher percentage of service industry employment than the United States to begin with, that is expected because a higher base to start causes a lower growth rate. Except for agriculture, fishing and forestry, which is less than 1 percent share, and finance, insurance and real estate, the service industry is the only one with a projected increase in share over the 2000-2010 decade. That is true for the United States as well except transportation which is forecast to increase one tenth of 1 percent in the 2000-2010 decade. Otherwise the service sector employment share increases while all others decline.

Chart 2 – Percent Shares of Employment by Industry for D.C., PMSA and U.S.



Industry Projections 2000-2010 (cont.)

Table 1
Employment Projections for the Washington Area and U.S. by Major Industry Group, 2000-2010

Industry	2000	2010	2000 Share	2010 Share	Growth	Growth Rate
Washington, D.C.						
Total, All Industries***	680,042	749,292	100.00%	100.00%	69,250	1.0%
Agriculture, Forestry and Fishing	267	335	0.04%	0.04%	68	2.3%
Mining	40	37	0.01%	0.00%	(3)	-0.8%
Construction	10,919	11,927	1.61%	1.59%	1,008	0.9%
Manufacturing	11,387	11,369	1.67%	1.52%	-18	0.0%
Durable Goods	948	982	0.14%	0.13%	34	0.4%
Non-Durable Goods	10,439	10,387	1.54%	1.39%	(52)	0.0%
Transportation, Communications and Utilities*	26,655	27,457	3.92%	3.66%	802	0.3%
Wholesale Trade	5,560	4,994	0.82%	0.67%	(566)	-1.1%
Retail Trade	46,138	47,371	6.78%	6.32%	1,233	0.3%
Finance, Insurance and Real Estate	32,239	35,728	4.74%	4.77%	3,489	1.0%
Services	306,332	355,939	45.05%	47.50%	49,607	1.5%
Self-Employed	39,302	39,744	5.78%	5.30%	442	0.1%
Federal Government*	175,847	186,601	25.86%	24.90%	10,754	0.6%
State and Local Government**	25,356	27,790	3.73%	3.71%	2,434	0.9%
Washington, PMSA						
Total, All Industries***	2,979,463	3,475,017	100.00%	100.00%	495,554	1.6%
Agriculture, Forestry and Fishing	21,656	28,134	0.73%	0.81%	6,478	2.7%
Mining	1,153	1,280	0.04%	0.04%	127	1.1%
Construction	151,796	174,606	5.09%	5.02%	22,810	1.4%
Manufacturing	101,111	113,901	3.39%	3.28%	12,790	1.2%
Durable Goods	47,580	55,592	1.60%	1.60%	8,012	1.6%
Non-Durable Goods	53,531	58,309	1.80%	1.68%	4,778	0.9%
Transportation, Communications and Utilities*	157,856	184,073	5.30%	5.30%	26,217	1.5%
Wholesale Trade	84,943	94,100	2.85%	2.71%	9,157	1.0%
Retail Trade	410,421	476,886	13.77%	13.72%	66,465	1.5%
Finance, Insurance and Real Estate	149,231	165,890	5.01%	4.77%	16,659	1.1%
Services	1,236,404	1,525,520	41.50%	43.90%	289,116	2.1%
Self Employed	234,424	253,057	7.87%	7.28%	18,633	0.8%
Federal Government*	310,152	326,150	10.41%	9.39%	15,998	0.5%
State and Local Government**	120,316	131,420	4.04%	3.78%	11,104	0.9%
United States (in Thousands)						
Total, All Industries***	145,594	167,754	100.00%	100.00%	22,160	1.4%
Agriculture, Forestry and Fishing	3,526	3,849	2.42%	2.29%	323	0.9%
Mining	543	488	0.37%	0.29%	(55)	-1.1%
Construction	6,698	7,522	4.60%	4.48%	824	1.2%
Manufacturing	18,469	19,047	12.69%	11.35%	578	0.3%
Durable Goods	11,138	11,780	7.65%	7.02%	642	0.6%
Non-Durable Goods	7,331	7,267	5.04%	4.33%	(64)	-0.1%
Transportation, Communications and Utilities	7,019	8,274	4.82%	4.93%	1,255	1.7%
Wholesale Trade	7,024	7,800	4.82%	4.65%	776	1.1%
Retail Trade	23,307	26,400	16.01%	15.74%	3,093	1.3%
Finance, Insurance and Real Estate	7,560	8,247	5.19%	4.92%	687	0.9%
Services	39,340	52,233	27.02%	31.14%	12,893	2.9%
Self-Employed	11,428	11,458	7.85%	6.83%	30	0.0%
Federal Government	2,777	2,622	1.91%	1.56%	(155)	-0.6%
State and Local Government	17,903	19,814	12.30%	11.81%	1,911	1.0%

Source: D.C. Dept. of Employment Services 2000-2010 Projections and Monthly Labor Review, Nov. 2001

*Postal Service included with Transportation, Communications, and Public Utilities and excluded from Federal Government

**Public Hospitals and Education excluded from State and Local Government and included with Services

*** Excludes non-classifiable jobs

Industry Projections 2000-2010 (cont.)

Exhibit 2-Employment Projections by Industry from Table 1

Agriculture, Forestry and Fishing	Even though growth rate projections here are over 2 percent, employment totals are so small that the industry will remain a small source of employment growth.
Mining	Growth slightly over 100 jobs is expected for the metropolitan area; these are mostly industry representatives not miners. This industry is declining in the United States.
Construction	Growth of 22,810 jobs is expected, but more than 95 percent are forecast for the suburban areas.
Manufacturing	Growth of 12,790 jobs is forecast for PMSA manufacturing, with D.C. declining slightly. Two-thirds are in durable goods manufacturing. This industry is growing much more slowly in the United States.
Transportation, Communications and Public Utilities	Growth of 26,217 jobs is forecast for the region, but only 802 for the District. In recent years, communications jobs have been leaving the District and this is not expected to turn around. The U.S. growth rate is slightly faster than that in the metropolitan area.
Wholesale Trade	Modest 1 percent growth in wholesale trade is expected for the metropolitan area, but the industry in the District is expected to decline as it has been doing through the 1990's.
Retail Trade	Retail will increase slightly in the District, but is expected to be a big gainer in the suburban jurisdictions, adding more than 66,000 jobs by 2010. Eating and drinking establishments are expected to be a large share of the total. Growth here is slightly faster than in the United States.
Finance, Insurance and Real Estate	Both D.C. and the PMSA are expected to increase at 1 percent a year, about the same as the national average. It should be approximately 3,500 more jobs for D.C. and over 16,000 for the metropolitan area.
Services	Services are forecasted to be the primary source of new employment. Both the forecasted amounts in the District and the region are more than double the totals for all other industries. Job growth of approximately 290,000 in the PMSA is expected. Computer and data processing should be nearly 90,000 of this total; legal services will generate as much as 25,000 of the total. Services in the United States will grow even faster than in the Washington area.
Federal Government	The federal government is not subject to the same market forces as other industries, which makes it hard to forecast. However, growth of more than 15,000 new jobs is expected with 10,754 forecasted in the District. More jobs in the District than the metropolitan area are partly due to the transfer of Navy jobs from Crystal City to the District of Columbia. Federal jobs are projected to decline in the United States.
State and Local Government	Both the District and surrounding jurisdictions are expecting just under 1 percent growth in government employment through 2010. The forecasted total is 11,104, with 2,434 of those jobs in the District. A similar pattern prevails in the United States.

Industry Projections 2000-2010 (cont.)

High Growth Industries

Table 2 (pg. 7) shows the District's high growth three-digit industries by industry group and projected employment growth.⁷ Here we are looking at industries classified by a three-digit SIC code. There are 313 such industries in the District and 427 in the metropolitan area. The top 40 growth industries by job growth make up 97 percent of the District's projected employment growth. This percentage is exaggerated because projected declines in employment in 85 industries decrease the denominator. Printing and publishing, formerly a major source of manufacturing employment, is migrating to the suburban jurisdictions; it is a major source of job loss. Gains in service industry employment make up 72.6 percent of the total gain and 74.8 percent of top 40 gain in employment. Computer data processing and legal services, both important parts of the service sector, are expected to be the biggest gainers in the private sector.

Table 2
High Employment Growth Industries, District of Columbia, 2000-2010*

SIC	Industry Breakdown	Growth	Percent of Growth
	Construction	421	0.61%
152	Residential Building Construction	421	0.61%
	Transportation	464	0.67%
411	Passenger Transportation Arrangement	249	0.36%
472	Local and Suburban Transportation	215	0.31%
	Communications	***	***
483	Radio and Television Broadcasting	1,097	1.58%
484	Cable and Other Pay TV Services	***	***
	Retail Trade	1,088	1.57%
581	Eating and Drinking Places	1,088	1.57%
	Finance, Insurance and Real Estate	2,934	4.24%
653	Real Estate Agents and Managers	1,389	2.01%
671	Holding Offices	494	0.71%
621	Security Brokers and Dealers	471	0.68%
611	Federal and Federal-sponsored Credit	***	***
651	Real Estate Operators and Lessors	245	0.35%
	Services	50,299	72.63%
811	Legal Services	9,557	13.80%
737	Computer and Data Processing Services	8,011	11.57%
736	Personnel Supply Services	4,321	6.24%
701	Hotels and Motels	3,308	4.78%
873	Research And Testing Services	2,906	4.20%
874	Management and Public Relations	2,527	3.65%
862	Professional Organizations	2,464	3.56%
866	Religious Organizations	2,138	3.09%
734	Services to Buildings	2,131	3.08%
738	Miscellaneous Business Services	1,784	2.58%
871	Engineering and Architectural Services	1,722	2.49%
836	Residential Care	1,368	1.98%
733	Mailing, Reproduction., and Stenographic Services	1,152	1.66%
839	Social Services, n.e.c.	754	1.09%
799	Miscellaneous Amusement and Recreation Services	736	1.06%
835	Child Day Care Services	714	1.03%
832	Individual and Family Services	695	1.00%
805	Nursing and Personal Care Facilities	674	0.97%
801	Offices and Clinics Of Medical Doctors	529	0.76%
863	Labor Organizations	428	0.62%
833	Job Training and Related Services	417	0.60%
794	Commercial Sports	409	0.59%
808	Home Health Care Services	377	0.54%
899	Services, n.e.c.	360	0.52%
821	Elementary and Secondary Schools	297	0.43%
781	Motion Picture Production and Services	287	0.41%
865	Political Organizations	233	0.34%
	Government	13,184	19.04%
902	Federal Government, Except Postal	10,750	15.52%
901	State Government, Except Education and Hospitals	2,434	3.51%

⁷ Industries classified by three digit SIC code, or Standard Industrial Classification.

* Top 40 3-digit industries in job growth

***Details withheld to preserve confidentiality

Industry Projections 2000-2010 (cont.)

Table 3 (pg. 8) shows high employment growth industries by projected employment growth for the PMSA. The top 40 in the PMSA represents 78.4 percent of the PMSA projected employment growth, lower than the District but still significant. Service sector employment is 67.9 percent of the top 40 growth in employment. The largest employment growth is expected in computer and data processing jobs with 80,395 projected growth. Because the suburban jurisdictions have undeveloped space, two important sources of employment growth are expected to be at elementary and secondary schools and eating and drinking places. Increases in employment in eating and drinking places are projected at 32,739; at elementary and secondary schools, 24,953. Legal services, medical services at clinics and architectural services are associated with suburban growth and all are projected big gainers.

Table 3
High Employment Growth Industries - Washington, PMSA 2000-2010*

SIC	Industry Breakdown	Growth	Percent of Growth
	Agriculture, Forestry and Fishing	4,097	0.83%
078	Landscape and Horticultural Services	4,097	0.83%
	Construction	10,468	2.11%
171	Plumbing, Heating, Air Conditioning	5,335	1.08%
154	Nonresidential Building Construction	2,584	0.52%
162	Heavy Construction, Except Highway	2,549	0.51%
	Transportation and Communications	18,882	3.81%
481	Telephone Communications	9,459	1.91%
451	Air Transportation, Scheduled	6,719	1.36%
483	Radio and Television Broadcasting	2,704	0.55%
	Retail Trade	64,235	12.96%
581	Eating and Drinking Places	32,739	6.61%
541	Grocery Stores	9,595	1.94%
594	Miscellaneous Shopping Goods Stores	6,207	1.25%
551	New and Used Car Dealers	3,914	0.79%
531	Department Stores	3,589	0.72%
573	Radio, Television, and Computer Stores	2,820	0.57%
571	Furniture and Homefurnishings Stores	2,750	0.55%
514	Groceries and Related Products	2,621	0.53%
	Finance, Insurance and Real Estate	3,740	0.75%
653	Real Estate Agents and Managers	3,740	0.75%
	Services	263,724	53.22%
737	Computer and Data Processing Services	80,395	16.22%
821	Elementary and Secondary Schools	24,953	5.04%
811	Legal Services	16,610	3.35%
801	Offices and Clinics Of Medical Doctors	16,561	3.34%
874	Management and Public Relations	16,401	3.31%
871	Engineering and Architectural Services	12,325	2.49%
835	Child Day Care Services	11,695	2.36%
736	Personnel Supply Services	11,646	2.35%
799	Miscellaneous Amusement and Recreation Services	10,126	2.04%
701	Hotels and Motels	8,958	1.81%
805	Nursing and Personal Care Facilities	7,313	1.48%
822	Colleges and Universities	7,143	1.44%
839	Social Services, n.e.c.	6,974	1.41%
872	Accounting, Auditing, and Bookkeeping	5,435	1.10%
836	Residential Care	5,122	1.03%
832	Individual and Family Services	4,480	0.90%
833	Job Training and Related Services	4,206	0.85%
753	Automobile Repair Shops	3,510	0.71%
862	Professional Organizations	3,415	0.69%
802	Offices and Clinics Of Dentists	3,304	0.67%
808	Home Health Care Services	3,152	0.64%
	Government	23,313	4.70%
903	Local Government, Except Education and Hospitals	17,315	3.49%
901	Federal Government, Except Postal	5,998	1.21%

* Top 40 3-digit industries in job growth

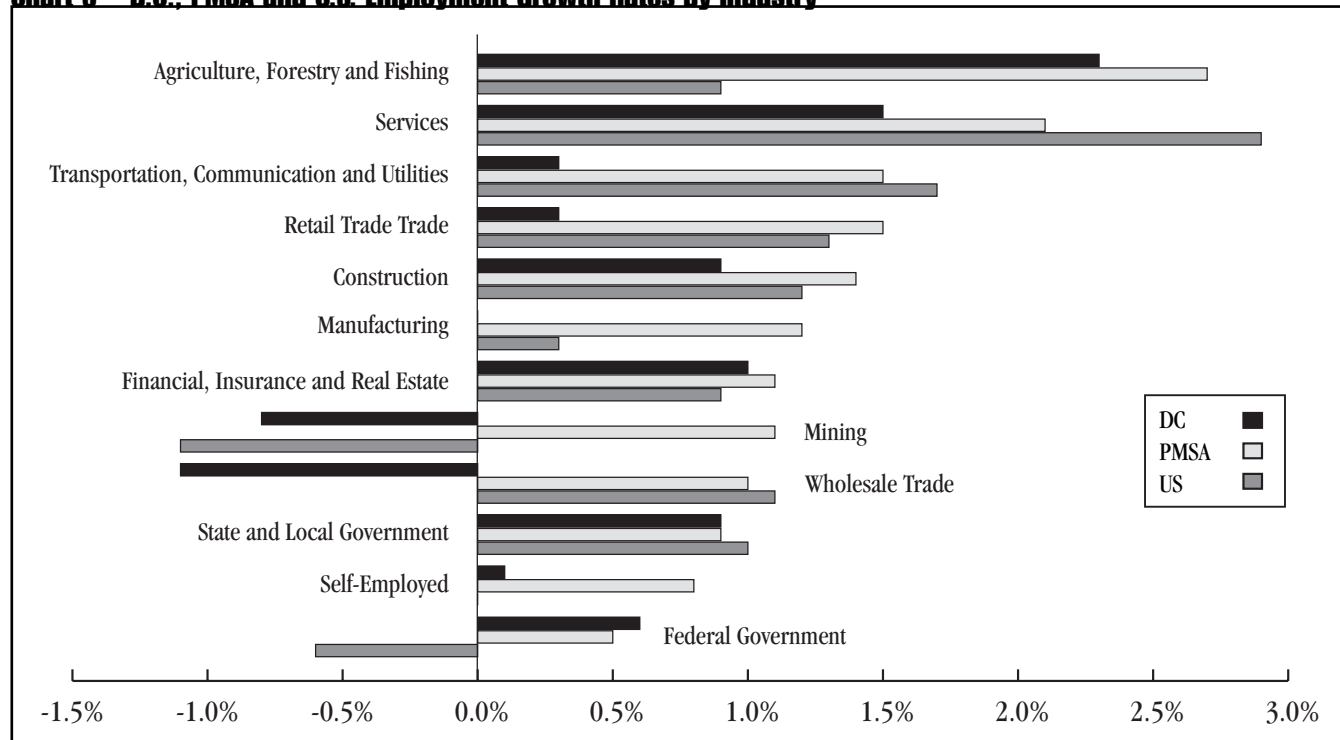
Industry Projections 2000-2010 (cont.)

Table 4 (pg. 9) shows the high employment growth industries common to both D.C. and the PMSA. Of the top 40 industries in the D.C. core and the outlying PMSA, 21 are common to both. The right two columns are the ratio of employment growth for each industry to total forecasted employment growth. Roughly 60 percent of employment growth falls in these 21 industries. Many of these are related to health care: offices and clinics of medical doctors, nursing care, home health care, individual and family services, residential care and social services. Two are related to the so-called hospitality industry: hotels and motels and eating and drinking. The rest cover a broad spectrum of contemporary life, from entertainment to housing, from legal services to education.

Table 4
High Employment Growth Industries Common to Both D.C. and the PMSA

SIC	Industry Breakdown	Percent of D.C. Growth	Percent of PMSA Growth
483	Transportation and Communications	1.58%	0.55%
	Radio and Television Broadcasting	1.58%	0.55%
	Retail Trade	1.57%	6.61%
581	Eating and Drinking Places	1.57%	6.61%
	Finance, Insurance and Real Estate	2.01%	6.61%
653	Real Estate Agents and Managers	2.01%	0.75%
	Services	52.39%	49.30%
701	Hotels and Motels	4.78%	1.81%
736	Personnel Supply Services	3.08%	2.35%
737	Computer and Data Processing Services	11.57%	16.22%
799	Miscellaneous Amusement and Recreation Services	1.06%	2.04%
801	Offices and Clinics Of Medical Doctors	0.76%	3.34%
805	Nursing and Personal Care Facilities	0.97%	1.48%
808	Home Health Care Services	0.54%	0.64%
811	Legal Services	13.80%	3.35%
821	Elementary and Secondary Schools	0.43%	5.04%
832	Individual and Family Services	1.00%	0.90%
833	Job Training and Related Services	0.60%	0.85%
835	Child Day Care Services	1.03%	2.36%
836	Residential Care	1.98%	1.03%
839	Social Services, n.e.c.	1.09%	1.41%
862	Professional Organizations	3.56%	0.69%
871	Engineering and Architectural Services	2.49%	2.49%
874	Management and Public Relations	3.65%	3.31%

Chart 3 – D.C., PMSA and U.S. Employment Growth Rates by Industry



Occupational Projections 2000-2010

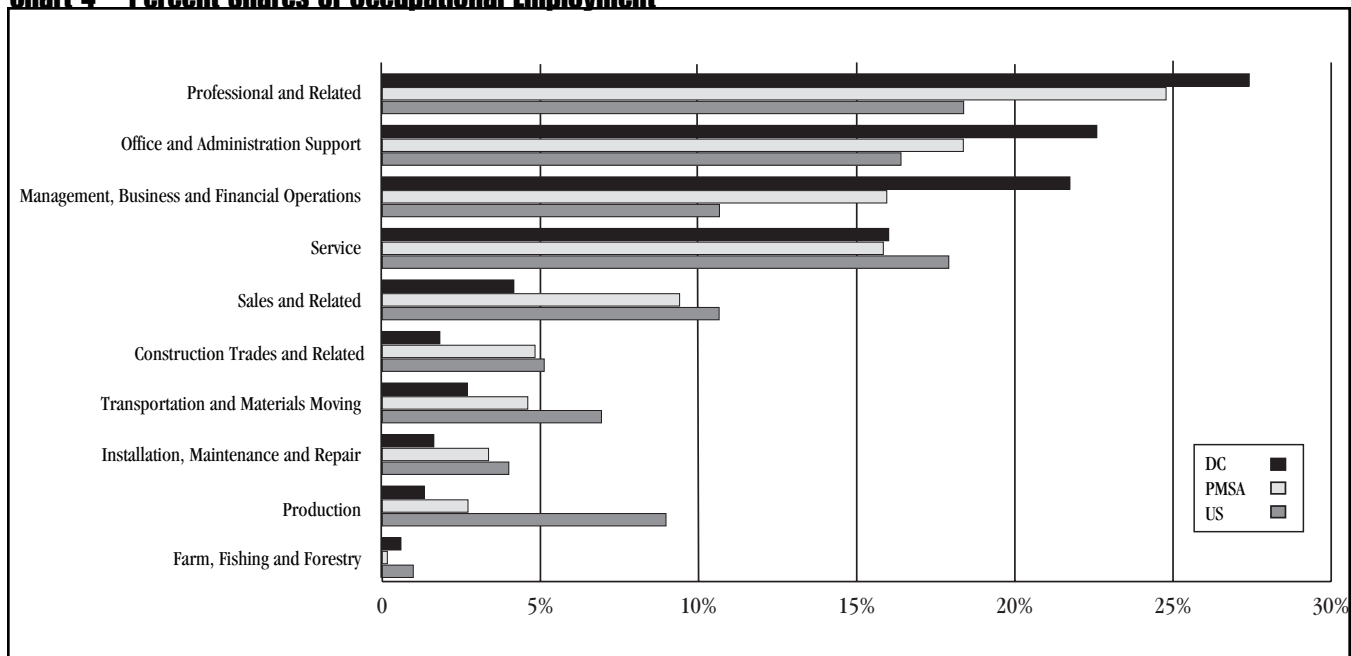
Employment by Major Occupational Group in 2000ⁱⁱ

Locally high shares of service sector and federal government employment results in a much different mixture of occupations than is typical of employment shares in the national economy. These effects are illustrated in **Chart 4** (pg. 12) and documented in **Table 5** (pg. 14).

Chart 4 (pg. 12) shows the share that each of the 10 major occupational groups has in total employment. It is organized from top to bottom by major occupational group with decreasing occupational shares for the metropolitan area or PMSA. For the first three groups – professional, office and administrative support and management— the D.C. share exceeds the overall metropolitan area share, which in turn exceeds the average share for the United States as a whole. In service occupations the District and PMSA shares are a little under the U.S. share. In the remaining occupations except farm, fishing and forestry, the District's share is less than half the national average. In sales, construction and installation, the PMSA shares are a little below the national shares. In transport the PMSA share is midway between the D.C. and U.S. shares. In production the U.S. share is much larger than the PMSA share and larger still than the District's share.

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Chart 4 – Percent Shares of Occupational Employment



Occupational Projections 2000-2010 (cont.)

Projected Job Growth by Major Occupational Group^{II}

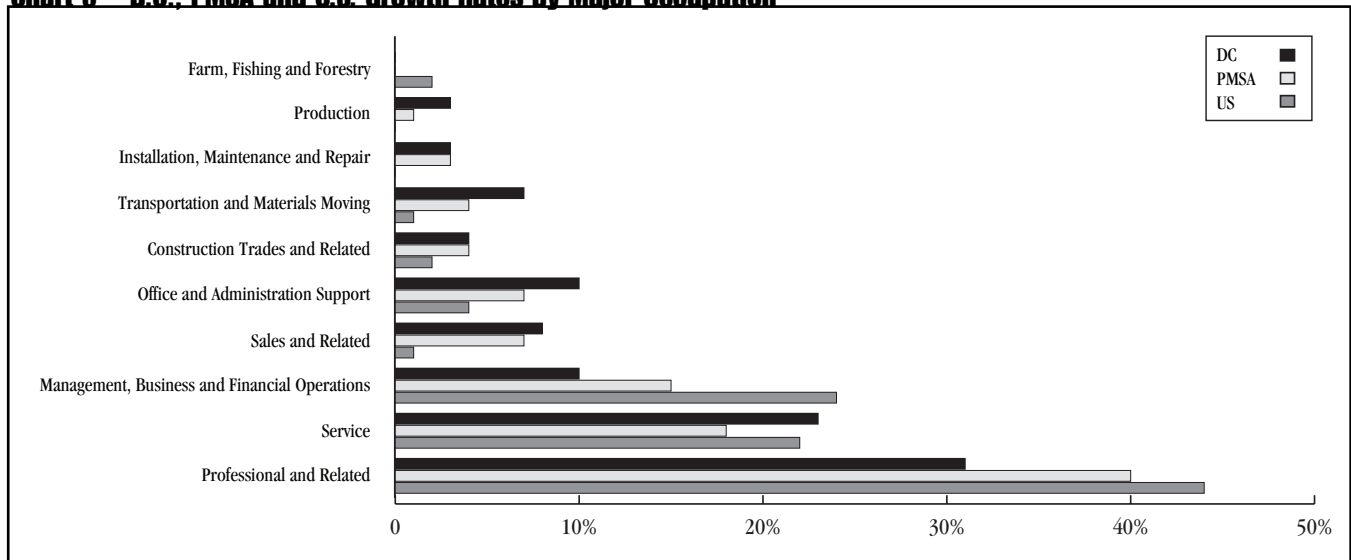
Among the 10 major occupational groups in **Table 5** (pg. 14), three account for most of the expected area job growth: Professional, service and management. **Chart 5** (pg. 13) illustrates this graphically, showing these groups with dramatically larger shares. In **Chart 5** (pg. 13) the major occupational groups are organized in decreasing orders of magnitude by PMSA job share. In the PMSA, service occupations are second in importance and management occupations third, while in the District management occupations are second and service occupations are third. More than 40 percent of the District's expected employment growth and 55 percent of the PMSA growth is expected to be in professional occupations. Management occupations are expected to add another 24 percent of District job growth and only 15 percent of PMSA job growth. Service occupations are expected to contribute approximately 22 percent of job growth in the District and approximately 18 percent of job growth in the PMSA.

Professional occupations in both the District of Columbia and the PMSA have the highest expected growth rates.

The seven remaining occupational groups are forecast to have slower growth, especially in the District. Installation, maintenance and repair occupations are expected to decline. Sales, office and administrative support, construction, production, and transportation occupations are not expected to generate many new jobs either. Automation technologies are reducing office and administrative support occupations nationwide, and the District is also affected. Farm, fishing and forestry will not be a source of significant employment growth.

The PMSA presents a slightly different picture among these seven occupational groups. Sales occupations are expected to contribute significant growth in the PMSA even though they will show a decreasing share of employment by 2010. Sales jobs are forecast to make up slightly more than 7 percent of new jobs. Construction, installation-maintenance-repair, and transportation occupations combined are expected to contribute 11 percent of job growth, but they are still forecast to have a smaller share of PMSA employment by 2010. Like the District, PMSA office and administrative support occupations and production occupations will have very slow employment growth, contributing about 8 percent of new jobs.

Chart 5 – D.C., PMSA and U.S. Growth Rates by Major Occupation



Occupational Projections 2000-2010 (cont.)

Table 5
Employment Projections by Major Occupational Group, 2000-2010

Industry	2000	2010	2000 Share	2010 Share	Growth Rate
Washington, D.C.					
Total All Occupations	680,042	749,292	100.00%	100.00%	0.97%
Management Business and Financial Operations	147,834	164,678	21.74%	21.98%	1.08%
Professional and Related Service	186,406	216,721	27.41%	28.92%	1.52%
Sales and Related	109,086	124,300	16.04%	16.59%	1.31%
Office and Adm. Support	28,261	29,066	4.16%	3.88%	0.28%
Farm, Fishing and Forestry	153,621	156,317	22.59%	20.86%	0.17%
Construction Trades and related	4,022	5,398	0.59%	0.72%	2.99%
Installation, Maintenance, and Repair	12,398	13,507	1.82%	1.80%	0.86%
Production	11,062	10,802	1.63%	1.44%	-0.24%
Transport and Materials Moving	9,026	9,298	1.33%	1.24%	0.30%
	18,326	19,305	2.69%	2.58%	0.52%
Washington, PMSA					
Total All Occupations	2,979,463	3,475,017	100.00%	100.00%	1.55%
Management Business and Financial Operations	475,083	550,243	15.95%	15.83%	1.6%
Professional and Related Service	738,361	935,696	24.78%	26.93%	2.7%
Sales and Related	471,857	561,678	15.84%	16.16%	1.9%
Office and Adm. Support	280,054	317,203	9.40%	9.13%	1.3%
Farm, Fishing and Forestry	547,345	580,571	18.37%	16.71%	0.6%
Construction Trades and Related	4,889	5,614	0.16%	0.16%	1.5%
Installation, Maintenance, and Repair	143,939	165,518	4.83%	4.76%	1.5%
Production	100,063	113,955	3.36%	3.28%	1.4%
Transport and Materials Moving	80,889	87,798	2.71%	2.53%	0.9%
	136,983	156,741	4.60%	4.51%	1.4%
United States in Thousands					
Total All Occupations	145,594	167,754	100.00%	100.00%	1.43%
Management Business and Financial Operations	15,519	17,635	10.66%	10.51%	1.29%
Professional and Related Service	26,758	33,709	18.38%	20.09%	2.34%
Sales and Related	26,075	31,163	17.91%	18.58%	1.80%
Office and Adm. Support	15,513	17,365	10.65%	10.35%	1.13%
Farm, Fishing and Forestry	23,882	26,053	16.40%	15.53%	0.87%
Construction Trades and Related	1,429	1,480	0.98%	0.88%	0.35%
Installation, Maintenance, and Repair	7,451	8,439	5.12%	5.03%	1.25%
Production	5,820	6,482	4.00%	3.86%	1.08%
Transport and Materials Moving	13,060	13,811	8.97%	8.23%	0.56%
	10,088	11,618	6.93%	6.93%	1.42%

Source: D.C. Dept. of Employment Services 2000-2010 Projections and Monthly Labor Review, Nov 2001

Occupational Projections 2000-2010 (cont.)

Projected Job Growth Within Occupational Groups

Occupational growth within the 10 occupational groups is uneven often with a few occupations dominating the increases.

Management, Business and Financial Occupations

In the District, seven of the 56 management, business and financial occupations account for 71 percent of expected growth. Management analysts are by far the highest with an expected increase of 5,535. The next two – general and operations managers, and business operations specialists – have forecast increases of 1,475 and 1,478 respectively. Computer and information managers has a forecast increase of 1,157, which is a 3.24 percent annual increase; only three management occupations have forecast annual growth rates above 3 percent.

In the PMSA, management occupations are expected to be the big gainers with a 75,160 expected job growth, and seven of the 59 occupations making up 55 percent of it. General and operations managers, and management analysts are forecast to have nearly 28 percent of management growth in the PMSA. Computer and information systems managers is third in job growth with 5,820 expected new jobs, but starting from a smaller base it has a 3.18 percent expected annual job growth rate, ranking third among managerial occupations for growth rate increases.

Professional Occupations

In the District, employment growth for professional occupations is forecast to increase more than 30 thousand jobs across 247 occupations. More than one third of growth is in 10 computer occupations, which also have the highest growth rates. Lawyers and paralegals are expected to increase more than 5,000 during the decade, which is about 20 percent of professional growth. Except for registered nurses, most healthcare employment growth is expected in the suburban jurisdictions. There are 33 occupations with forecast declines; more than 100 occupations are expected to have minimal growth of 100 jobs or less. Professional growth looks very uneven in the District.

In the PMSA, 256 professional occupations account for PMSA job growth of just under 200,000 jobs out of nearly a half million new jobs over the decade. Growth is forecast for a broader group of occupations than the District, but forecast growth is still uneven. Computer occupations make up 43 percent of professional job growth in only 16 occupations. Next is teaching with about 19 percent in all levels of teaching from preschool through college. Healthcare occupations are third with expected job growth above 22,000 which is 11 percent of professional job growth. Legal professions have expected job growth of nearly 15,000, more than 70 percent of it among lawyers. Physical and social science professions are lowest in the professional group with growth of less than 3 percent or slightly more than 5,000.

Service Occupations

Service occupations are the third highest source of job growth in the District and second highest in the PMSA. Security and police employment and housekeeping-janitorial services occupations make up the bulk of expected growth in the District. Even though they are half of the forecast job growth, they should generate no more than 9,000 to 10,000 jobs. Service occupations have 18 percent of PMSA job growth. The growth is spread over 96 occupations with only four occupations expecting job growth over 5,000. The two highest are food preparation and serving workers, and waiters and waitresses. Service employment is typically lower wage employment.

Occupational Projections 2000-2010 (cont.)

Sales Occupations

Sales occupations in the District are not expected to be a source of significant job growth with seven of the 21 sales occupations forecast to decline over the decade. Sales occupations in the PMSA have expected growth of 37,149 jobs or about 7.5 percent of growth for the decade. More than 70 percent of these jobs are cashier, retail salespersons, and retail sales managers.

All Other Occupational Categories

In the District, all other occupational categories combined are only 10 percent of job growth, less than half of forecast growth in service occupations alone. There are a few office and administrative support occupations with significant expected job growth (customer service occupations, office clerks and legal secretaries) but 31 of 57 occupations have expected job loss. Farm, fishing and forestry, construction, installation, maintenance and repair, Production, and transportation occupations have small shares of District employment and these shares are expected to decline further.

In the PMSA, all other occupational categories have forecast growth below those in management, professional and service occupations. Office and administrative support occupations has a high forecast total, 33,226, but 25 of its 57 occupations have forecast declines. Customer sales representatives are expected to increase by 10,664, nearly a third of net growth in office and administrative support occupations. Secretaries, word processors, typists, tellers, and telephone operators are occupations expected to decline throughout the PMSA primarily due to automation technology. Both construction and transportation will make up around 4 percent of job growth, which amounts to approximately 20,000 jobs. More than 60 percent of the 21,579 construction jobs are in skilled trades: electrician, carpenter, brick mason. About 4,000 or 18 percent are lesser skilled construction laborers. In transportation, nearly half the 19,758 expected jobs are in occupations requiring driving: truck, bus, taxi, ambulance and others.



Occupational Projections 2000-2010 (cont.)

High Demand Occupations

High demand occupations are those with the largest number of average annual openings. Openings have two components: (1) job growth, and (2) net replacements. The growth component is the annual increase in new jobs in an occupation. The replacement component consists of jobs that open because an employee leaves his or her position to be promoted, to relocate, retire or for some other reason.

The forecasting tool used to estimate openings, MicroMatrix, makes its estimates based on net national replacement rates. Net replacement rates are based on net separations, which measure the movement of experienced workers into and out of occupations. Where growth is negative, that is, where the industry is declining, the Micro-Matrix program sets openings equal to replacements.

The 40 occupations with the highest forecasted demand for the District of Columbia and PMSA appear in **Table 6** (pg. 18) and **Table 7** (pg. 19). Annual openings in the District of Columbia are projected to be 22,398 from 2000 to 2010. The top 40 occupations with respect to annual openings account for 53.4 percent of total openings. Management analysts and lawyers, both occupations with a high share of self employed, are expected to be the biggest source of openings with 779 and 710 openings, respectively. Computer employment in 10 different detailed occupations totals 1,265 openings annually.

Annual openings are forecast at 117,788 in the PMSA. Of these, 56,281, or 47.8 percent, are expected to be in the top 40 occupations listed in **Table 7** (pg. 19). The biggest share of the top 40, 27 percent, is in the professional and related occupations. These are concentrated in computer technology, teaching and education and two specialized careers, registered nursing and law. Service occupations are next with 20.6 percent of openings. Managerial, sales and related occupations have roughly 15 to 16 percent each of job openings.

Table 8 (pg. 20) gives the high demand occupations common to both the District of Columbia and the PMSA. Twenty-eight occupations occur in both the top 40 lists for D.C. or the PMSA. The common group in the top 40 is roughly 40 percent of annual job openings in the two areas. There are six specific occupations within professional occupations that are common to both, led by lawyers and three computer occupations; they total 19 percent of the District's openings and 17 percent of the region's openings. Seven specific occupations led by management analysts are common to both areas in the Management, Business and Financial Operations group; they total 13 percent of the District's openings and 8 percent of regional openings. Eight specific occupations led by janitors are common to the two areas in the service group; they total 10 percent of District openings and 9 percent of metropolitan area openings. There are another six occupations in office and administrative support that are common to both areas. Additional details can be read from **Table 8** (pg. 20).

One can also learn about the city's comparative specialization from the top 40 occupations that are not in common with the wider regions. Public relations specialists, economists, editors, paralegals, legal secretaries and detectives are among high demand occupations unique to the District. Similarly one can learn about the patterns that predominate in the PMSA from the top occupations not shared with the District computer programmers, network and computer systems administrators, customer service representatives, teachers, landscaping and grounds keeping workers, and light truck drivers are high demand occupations in the PMSA but not in the District. They reflect the competitive edge that outlying jurisdictions have in information technology, and as bedroom communities.



Occupational Projections 2000-2010 (cont.)

Table 6
Top 40 High Demand Occupations - Washington, D.C.

SOC	Occupational Group	Ave Annual Openings
	Management Business and Financial Operations	3,094
13-1111	Management Analysts	779
13-1199	Business Operations Specialists, All Other	522
11-1021	General and Operations Managers	432
11-9199	Managers, All Other	370
11-1011	Chief Executives	351
13-2011	Accountants and Auditors	175
11-3021	Computer and Information Systems Managers	170
11-3031	Financial Managers	152
11-3011	Administrative Services Managers	143
	Professional and Related	2,643
23-1011	Lawyers	710
15-1051	Computer Systems Analysts	397
29-1111	Registered Nurses	281
15-1041	Computer Support Specialists	209
15-1032	Computer Software Engineers, Systems Software	170
19-3011	Economists	164
27-3041	Editors	156
23-2011	Paralegals and Legal Assistants	150
19-2099	Physical Scientists, All Other	141
27-3031	Public Relations Specialists	138
25-9041	Teacher Assistants	127
	Service	2,989
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	638
35-3031	Waiters and Waitresses	494
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	402
33-9032	Security Guards	399
37-2012	Maids and Housekeeping Cleaners	297
33-3051	Police and Sheriff's Patrol Officers	249
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	192
35-2021	Food Preparation Workers	163
33-3021	Detectives and Criminal Investigators	155
	Sales and Related	543
41-2011	Cashiers	325
41-2031	Retail Salespersons	218
	Office and Adm. Support	2,262
43-9061	Office Clerks, General	514
43-9999	Secretaries, Administrative Assistants, and Other Office Support Workers, All Other	504
43-6012	Legal Secretaries	351
43-6011	Executive Secretaries and Administrative Assistants	303
43-6014	Secretaries, Except Legal, Medical, and Executive	288
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	160
43-4171	Receptionists and Information Clerks	142
	Farm, Fishing and Forestry	189
45-9099	Farming, Fishing, and Forestry Workers, All Other (OES Only)	189
	Transport and Materials Moving	249
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	249

Occupational Projections 2000-2010 (cont.)

Table 7
Top 40 High Demand Occupations - Washington PMSA

SOC	Occupational Group	Ave Annual Openings
	Management Business and Financial Operations	8,807
11-1021-0035	General and Operations Managers	1,926
13-1111-0072	Management Analysts	1,739
13-1199	Business Operations Specialists, All Other	1,473
11-9199	Managers, All Other	1,038
13-2011-0079	Accountants and Auditors	895
11-1011-0016	Chief Executives	881
11-3021-0020	Computer and Information Systems Managers	855
	Professional and Related	15,172
15-1051-0105	Computer Systems Analysts	1,969
15-1032-0108	Computer Software Engineers, Systems Software	1,759
29-1111-0454	Registered Nurses	1,460
15-1031-0107	Computer Software Engineers, Applications	1,394
23-1011-0283	Lawyers	1,359
25-9041-0359	Teacher Assistants	1,343
15-1041-0109	Computer Support Specialists	1,290
15-1099-0113	Computer Specialists, All Other	1,060
25-2021-0337	Elementary School Teachers, Except Special Education	1,018
15-1071-0111	Network and Computer Systems Administrators	902
25-2031-0341	Secondary School Teachers, Except Special and Vocational Education	874
15-1021-0099	Computer Programmers	744
	Service	11,581
35-3021-0570	Combined Food Preparation and Serving Workers, Including Fast Food	3,778
35-3031-0573	Waiters and Waitresses	2,489
37-2011-0586	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,670
37-2012-0587	Maids and Housekeeping Cleaners	1,039
33-9032-0552	Security Guards	1,011
37-3011-0592	Landscaping and Groundskeeping Workers	863
35-2021-0567	Food Preparation Workers	731
	Sales and Related	8,907
41-2031-0668	Retail Salespersons	4,062
41-2011-0656	Cashiers	3,818
41-1011-0675	First-Line Supervisors/Managers of Retail Sales Workers	1,027
	Office and Adm. Support	9,846
43-9061-0740	Office Clerks, General	1,659
43-4051-0702	Customer Service Representatives	1,383
43-5081-0729	Stock Clerks and Order Fillers	1,256
43-4171-0712	Receptionists and Information Clerks	1,143
43-6011-0744	Executive Secretaries and Administrative Assistants	1,053
43-6014-0747	Secretaries, Except Legal, Medical, and Executive	929
43-1011-0683	First-Line Supervisors/Managers of Office and Administrative Support Workers	859
43-9999-0750	Secretaries, Administrative Assistants, and Other Office Support Workers, All Other	783
43-3031-0692	Bookkeeping, Accounting, and Auditing Clerks	781
	Transport and Materials Moving	1,968
53-7062-1120	Laborers and Freight, Stock, and Material Movers, Hand	1,252
53-3033-1086	Truck Drivers, Light or Delivery Services	716

Occupational Projections 2000-2010 (cont.)

Table 8
High Demand Occupations common to both D.C. and the PMSA

SOC	Occupation in Common	Percent of D.C. Annual Openings	Percent of PMSA Annual Openings
	Management Business and Financial Operations	12.50%	7.48%
11-1011	Chief Executives	1.57%	0.75%
11-1021	General and Operations Managers	1.93%	1.64%
11-3021	Computer and Information Systems Managers	0.76%	0.73%
11-9199	Managers, All Other	1.65%	0.88%
13-1111	Management Analysts	3.48%	1.48%
13-1199	Business Operations Specialists, All Other	2.33%	1.25%
13-2011	Accountants and Auditors	0.78%	0.76%
	Professional and Related	19.14%	16.89%
15-1032	Computer Software Engineers, Systems Software	0.76%	1.49%
15-1041	Computer Support Specialists	0.93%	1.10%
15-1051	Computer Systems Analysts	1.77%	1.67%
23-1011	Lawyers	3.17%	1.15%
25-9041	Teacher Assistants	0.57%	1.14%
29-1111	Registered Nurses	1.25%	1.24%
	Service	10.68%	9.10%
33-9032	Security Guards	1.78%	0.86%
35-2021	Food Preparation Workers	0.73%	0.62%
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1.79%	3.21%
35-3031	Waiters and Waitresses	2.21%	2.11%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2.85%	1.42%
37-2012	Maids and Housekeeping Cleaners	1.33%	0.88%
	Sales and Related	2.42%	6.69%
41-2011	Cashiers	1.45%	3.24%
41-2031	Retail Salespersons	0.97%	3.45%
	Office and Adm. Support	8.53%	5.46%
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	0.71%	0.73%
43-4171	Receptionists and Information Clerks	0.63%	0.97%
43-6011	Executive Secretaries and Administrative Assistants	1.35%	0.89%
43-6014	Secretaries, Except Legal, Medical, and Executive	1.29%	0.79%
43-9061	Office Clerks, General	2.29%	1.41%
43-9999	Secretaries, Administrative Assistants, and Other Office Support Workers, All Other	2.25%	0.66%
	Transport and Materials Moving	1.11%	1.06%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1.11%	1.06%

High Growth Occupations

The top high growth occupations are summarized in **Table 9** (pg. 22) and **Table 10** (pg. 23). **Table 9** (pg. 22) presents the District's 40 occupations with the highest forecast job growth over the 10 year period. Growth excludes replacements. The District's 40 highest growth occupations make up three quarters of the expected 69,250 employment growth over the 2000-2010 period. Lawyers are at the top of the professional and related occupations group which contains nearly 40 percent of the top 40 growth. Management analysts lead the managerial occupations which ranks second with 26 percent of the growth.

Twenty-nine of the District's high demand occupations are also in the top 40 high growth occupations. Lawyers, registered nurses and four computer occupations are in this group. The correlation of high demand with high growth for 29 occupations suggests that high demand is mostly due to growth and not replacements for these occupations. Conversely, for the 11 occupations with high demand that are not among the high growth occupations, the high demand results from a higher share of replacements. Security guards, stock clerks, secretaries and other administrative support occupations where turnover is great are among the high demand, but not among the high growth occupations.

Highlighting the security issues in the nation's capital, four of the high growth occupations in the District are security related: police and sheriff patrol officers, security guards, detectives and criminal investigators, and correctional officers and jailers. Police and sheriff patrol officers also appear on the PMSA list for the metropolitan area.

Table 10 (pg. 23) presents the metropolitan area's 40 occupations with the highest forecast growth in jobs over the 10 year period. The top 40 represent 56.3 percent of total expected job growth in the PMSA. The top 40 are expected to contribute 278,827 new jobs. Professional employment makes up the highest share of high growth occupations at 45 percent of total growth. The highest forecast growth is for computer software engineers-systems software with 16,210. Eight of 15, and six of the top seven, high growth occupations in the professional group are computer occupations. Computer specialty employment has a slightly higher share of job growth in the PMSA overall than in the District. Five teaching occupations, lawyers and registered nurses make up the remaining seven professional high growth occupations. There are 30 of the high demand occupations that are also among the high growth occupations.

Table 11 (pg. 24) gives the high growth occupations in common for both the District and the PMSA. The percentage of high growth in common to total growth is also given as above. There are 23 of 57 different occupations in the top 40 from either D.C. or the PMSA that are common to both. For growth, the common group in the top 40 is 54.6 percent of job growth over the 2000-2010 period in the District, and 69.81 percent of 2000-2010 growth in the region. In the subcategory "professional occupations," 11 of 20 professional occupations are in common. Notice the high percentage share in common of top 40 growth for the professional categories: 24 percent of the District's total job growth and 39.3 percent of the PMSA total job growth is common to the professional occupations.



Occupational Projections 2000-2010 (cont.)

Table 9
Top 40 Growth Occupations - Washington, D.C.

SOC	Occupational Group	2000	2010	Growth	Growth Rate
	Management Business and Financial Operations	83,460	97,074	13,614	1.52%
13-1111	Management Analysts	23,084	28,619	5,535	2.17%
13-1199	Business Operations Specialists, All Other	14,732	16,210	1,478	0.96%
11-1021	General and Operations Managers	16,704	18,179	1,475	0.85%
11-3021	Computer and Information Systems Managers	3,078	4,235	1,157	3.24%
11-1011	Chief Executives	8,077	9,053	976	1.15%
11-3011	Administrative Services Managers	4,728	5,390	662	1.32%
11-3031	Financial Managers	5,530	6,183	653	1.12%
11-2031	Public Relations Managers	2,506	3,116	610	2.20%
13-2099	Financial Specialists, All Other	2,627	3,205	578	2.01%
13-2031	Budget Analysts	2,394	2,884	490	1.88%
	Professional and Related	76,360	96,873	20,513	2.41%
23-1011	Lawyers	28,478	33,448	4,970	1.62%
15-1051	Computer Systems Analysts	9,245	12,377	3,132	2.96%
15-1041	Computer Support Specialists	2,651	4,629	1,978	5.73%
15-1032	Computer Software Engineers, Systems Software	1,597	3,191	1,594	7.17%
23-2011	Paralegals and Legal Assistants	4,762	5,973	1,211	2.29%
15-1099	Computer Specialists, All Other	1,908	2,905	997	4.29%
15-1071	Network and Computer Systems Administrators	1,508	2,416	908	4.83%
29-1111	Registered Nurses	9,741	10,573	832	0.82%
27-3031	Public Relations Specialists	3,285	4,091	806	2.22%
19-2099	Physical Scientists, All Other	1,764	2,418	654	3.20%
21-1093	Social and Human Service Assistants	2,185	2,828	643	2.61%
15-1031	Computer Software Engineers, Applications	733	1,329	596	6.13%
27-3041	Editors	2,902	3,465	563	1.79%
15-1061	Database Administrators	1,161	1,716	555	3.98%
15-1081	Network Systems and Data Communications Analysts	836	1,390	554	5.22%
25-9041	Teacher Assistants	3,604	4,124	520	1.36%
	Service	54,340	64,896	10,556	1.79%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	18,721	21,681	2,960	1.48%
37-2012	Maids and Housekeeping Cleaners	5,768	7,468	1,700	2.62%
33-3051	Police and Sheriff's Patrol Officers	5,557	6,876	1,319	2.15%
33-9032	Security Guards	10,649	11,730	1,081	0.97%
33-3021	Detectives and Criminal Investigators	2,470	3,465	995	3.44%
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	4,969	5,941	972	1.80%
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	4,224	4,995	771	1.69%
33-3012	Correctional Officers and Jailers	1,982	2,740	758	3.29%
	Office and Adm. Support	40,943	46,829	5,886	1.35%
43-9061	Office Clerks, General	12,635	15,340	2,705	1.96%
43-6012	Legal Secretaries	10,507	12,219	1,712	1.52%
43-4051	Customer Service Representatives	4,360	5,099	739	1.58%
43-6011	Executive Secretaries and Administrative Assistants	13,441	14,171	730	0.53%
	Farm, Fishing and Forestry	3,439	4,711	1,272	3.20%
45-9099	Farming, Fishing, and Forestry Workers, All Other (OES Only)	3,439	4,711	1,272	3.20%
	Transport and Materials Moving	5,990	6,465	475	0.77%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	5,990	6,465	475	0.77%

Occupational Projections 2000-2010 (cont.)

Table 10
Top 40 Growth Occupations - Washington PMSA

SOC	Occupational Group	2000	2010	Growth	Growth Rate
	Management Business and Financial Operations	208,710	244,696	35,986	1.60%
13-1111-0072	Management Analysts	59,133	71,329	12,196	1.89%
11-1021-0035	General and Operations Managers	63,516	72,078	8,562	1.27%
11-3021-0020	Computer and Information Systems Managers	15,930	21,790	5,860	3.18%
13-1199	Business Operations Specialists, All Other	37,103	42,416	5,313	1.35%
13-2011-0079	Accountants and Auditors	33,028	37,083	4,055	1.16%
	Professional and Related	296,689	421,226	124,537	3.57%
15-1032-0108	Computer Software Engineers, Systems Software	20,678	36,888	16,210	5.96%
15-1051-0105	Computer Systems Analysts	41,198	57,268	16,070	3.35%
15-1031-0107	Computer Software Engineers, Applications	17,030	29,828	12,798	5.76%
15-1041-0109	Computer Support Specialists	15,298	27,545	12,247	6.06%
23-1011-0283	Lawyers	42,543	53,274	10,731	2.27%
15-1099-0113	Computer Specialists, All Other	17,225	26,314	9,089	4.33%
15-1071-0111	Network and Computer Systems Administrators	11,017	19,569	8,552	5.91%
25-9041-0359	Teacher Assistants	23,721	32,188	8,467	3.10%
29-1111-0454	Registered Nurses	36,652	43,859	7,207	1.81%
25-2021-0337	Elementary School Teachers, Except Special Education	22,362	27,457	5,095	2.07%
15-1061-0110	Database Administrators	7,604	12,318	4,714	4.94%
25-2031-0341	Secondary School Teachers,				
	Except Special and Vocational Education	15,754	19,693	3,939	2.26%
15-1081-0112	Network Systems and Data Communications Analysts	5,532	9,071	3,539	5.07%
25-2011-0334	Preschool Teachers, Except Special Education	7,540	10,515	2,975	3.38%
25-3999-0351	Teachers, Primary, Secondary, and Adult, All Other (OES Only)	12,535	15,439	2,904	2.11%
	Service	208,598	256,255	47,657	2.08%
35-3021-0570	Combined Food Preparation				
	and Serving Workers, Including Fast Food	38,959	52,881	13,922	3.10%
35-3031-0573	Waiters and Waitresses	31,932	38,855	6,923	1.98%
37-2011-0586	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	58,370	64,524	6,154	1.01%
37-2012-0587	Maids and Housekeeping Cleaners	22,594	28,078	5,484	2.20%
37-3011-0592	Landscaping and Groundskeeping Workers	15,944	20,574	4,630	2.58%
31-1012-0512	Nursing Aides, Orderlies, and Attendants	17,547	21,856	4,309	2.22%
39-9011-0604	Child Care Workers	9,046	12,430	3,384	3.23%
33-3051-0544	Police and Sheriff's Patrol Officers	14,206	17,057	2,851	1.85%
	Sales and Related	176,873	203,528	26,655	1.41%
41-2011-0656	Cashiers	59,600	70,740	11,140	1.73%
41-2031-0668	Retail Salespersons	78,184	89,067	10,883	1.31%
41-1011-0675	First-Line Supervisors/Managers of Retail Sales Workers	39,089	43,721	4,632	1.13%
	Office and Adm. Support	152,780	179,932	27,152	1.65%
43-4051-0702	Customer Service Representatives	37,327	47,991	10,664	2.54%
43-9061-0740	Office Clerks, General	47,100	54,648	7,548	1.50%
43-4171-0712	Receptionists and Information Clerks	27,932	33,212	5,280	1.75%
43-6011-0744	Executive Secretaries and Administrative Assistants	40,421	44,081	3,660	0.87%
	Construction Trades and related	36,616	43,712	7,096	1.79%
47-2061-0794	Construction Laborers	20,316	24,148	3,832	1.74%
47-2111-0802	Electricians	16,300	19,564	3,264	1.84%
	Installation, Repair and Maintenance	16,130	19,009	2,879	1.66%
49-3023-0878	Automotive Service Technicians and Mechanics	16,130	19,009	2,879	1.66%
	Transport and Materials Moving	51,700	58,565	6,865	1.25%
53-3033-1086	Truck Drivers, Light or Delivery Services	22,679	26,719	4,040	1.65%
53-7062-1120	Laborers and Freight, Stock, and Material Movers, Hand	29,021	31,846	2,825	0.93%

Occupational Projections 2000-2010 (cont.)

Table 11
High Growth Occupations Common to Both the D.C. and the PMSA

SOC	Occupations in Common	Percent of D.C. Growth	Percent of PMSA Growth
	Management Business and Financial Operations	13.91%	11.45%
11-1021	General and Operations Managers	2.13%	3.07%
11-3021	Computer and Information Systems Managers	1.67%	2.10%
13-1111	Management Analysts	7.98%	4.37%
13-1199	Business Operations Specialists, All Other	2.13%	1.91%
	Professional and Related	23.99%	39.32%
15-1031	Computer Software Engineers, Applications	0.86%	4.59%
15-1032	Computer Software Engineers, Systems Software	2.30%	5.81%
15-1041	Computer Support Specialists	2.85%	4.39%
15-1051	Computer Systems Analysts	4.52%	5.76%
15-1061	Database Administrators	0.80%	1.69%
15-1071	Network and Computer Systems Administrators	1.31%	3.07%
15-1081	Network Systems and Data Communications Analysts	0.80%	1.27%
15-1099	Computer Specialists, All Other	1.44%	3.26%
23-1011	Lawyers	7.17%	3.85%
25-9041	Teacher Assistants	0.75%	3.04%
29-1111	Registered Nurses	1.20%	2.58%
	Service	10.02%	10.19%
33-3051	Police and Sheriff's Patrol Officers	1.90%	1.02%
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1.40%	4.99%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4.27%	2.21%
37-2012	Maids and Housekeeping Cleaners	2.45%	1.97%
	Office and Adm. Support	6.02%	7.84%
43-4051	Customer Service Representatives	1.07%	3.82%
43-6011	Executive Secretaries and Administrative Assistants	1.05%	1.31%
43-9061	Office Clerks, General	3.90%	2.71%
	Transport and Materials Moving	0.68%	1.01%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	0.68%	1.01%

Occupational Projections 2000-2010 (cont.)

Fastest Growing Occupationsⁱⁱⁱ

The 40 fastest growing occupations with growth over 100 jobs are detailed in **Table 12** (pg. 26) and **Table 13** (pg. 27). The six fastest growing occupations in the District shown in **Table 12** (pg. 26) are all computer occupations, and there are ten computer occupations in all among the top forty. These rates reflect the relatively smaller base of computer employment in the District, but eight of the high growth computer occupations are also in the high growth rate occupations. In all, there are 22 high growth occupations that are also among the top 40 of fastest growth rate occupations, a quite high share, but the District employment totals are lower to start. Only 13 occupations appear in all three categories.

Table 13 (pg. 27) presents the Metropolitan area's 40 fastest growing occupations with growth over 100 jobs. The highest annual growth rate is 6.1 percent for the Computer Support Specialist occupation and there are eight other computer occupations in the table. Only 13 occupations in the high growth group are also in the top 40 for fastest growth, nine less than the District. Of these, nine are computer occupations; others are Child Care Worker, Teacher Assistant and Preschool Teacher. Only 9 occupations are in all three PMSA tables: high demand, high growth and fastest growing, and seven of these are computer occupations. Child Care Worker is also in all three.

Another interesting dimension of the fastest growing occupations is the presence of numerous health related occupations. There are five health service occupations among the top forty fastest growing in the District and there are seven in the PMSA. In addition, there are four health professional occupations in the PMSA. Medical Assistants and Dental Assistants appear on both lists as do Fitness Trainers and Personal and Home Care Aides.

Security also shows up with three occupations among the top forty fastest growing occupations the District: Detectives and Criminal Investigators, Correctional Officers and Jailers, Police and Sheriff's Patrol Officers.

Table 14 (pg. 28) shows the fastest growing occupations common to D.C. and the PMSA. Two themes stand out. The first is the cluster of nine computer related occupations. No matter how the top occupations are counted, computer occupations are well represented. The second is the four health related occupations: Fitness Trainers, Personal and Home Care Aides, Medical Assistants, and Home Health Aides.

Occupational Projections 2000-2010 (cont.)

Table 12

Top 40 Fastest Growing Occupations with Growth over 100 Jobs - Washington, D.C.

SOC	Occupational Group	2000	2010	Growth	Growth Rate
	Management Business and Financial Operations	34,531	43,364	8,833	2.30%
13-2052	Personal Financial Advisors	549	760	211	3.31%
11-3021	Computer and Information Systems Managers	3,078	4,235	1,157	3.24%
11-9141	Property, Real Estate, and Community Association Managers	1,556	2,008	452	2.58%
11-2022	Sales Managers	1,131	1,421	290	2.31%
11-2031	Public Relations Managers	2,506	3,116	610	2.20%
13-1111	Management Analysts	23,084	28,619	5,535	2.17%
13-2099	Financial Specialists, All Other	2,627	3,205	578	2.01%
	Professional and Related	34,199	48,593	14,394	3.58%
15-1032	Computer Software Engineers, Systems Software	1,597	3,191	1,594	7.17%
15-1031	Computer Software Engineers, Applications	733	1,329	596	6.13%
15-1041	Computer Support Specialists	2,651	4,629	1,978	5.73%
15-1081	Network Systems and Data Communications Analysts	836	1,390	554	5.22%
15-1071	Network and Computer Systems Administrators	1,508	2,416	908	4.83%
15-1099	Computer Specialists, All Other	1,908	2,905	997	4.29%
15-1061	Database Administrators	1,161	1,716	555	3.98%
17-3012	Electrical and Electronics Drafters	247	347	100	3.46%
19-2099	Physical Scientists, All Other	1,764	2,418	654	3.20%
15-1051	Computer Systems Analysts	9,245	12,377	3,132	2.96%
21-2021	Directors, Religious Activities and Education	336	443	107	2.80%
15-1011	Computer and Information Scientists, Research	721	946	225	2.75%
21-1093	Social and Human Service Assistants	2,185	2,828	643	2.61%
27-1024	Graphic Designers	1,260	1,594	334	2.38%
23-2011	Paralegals and Legal Assistants	4,762	5,973	1,211	2.29%
27-3031	Public Relations Specialists	3,285	4,091	806	2.22%
	Service	21,534	27,948	6,414	2.64%
39-9021	Personal and Home Care Aides	514	772	258	4.15%
39-9031	Fitness Trainers and Aerobics Instructors	655	927	272	3.53%
33-3021	Detectives and Criminal Investigators	2,470	3,465	995	3.44%
33-3012	Correctional Officers and Jailers	1,982	2,740	758	3.29%
37-2012	Maids and Housekeeping Cleaners	5,768	7,468	1,700	2.62%
39-9099	Personal Care and Service Workers, All Other	442	568	126	2.54%
39-5011	Barbers	430	548	118	2.45%
31-9092	Medical Assistants	1,749	2,179	430	2.22%
33-3051	Police and Sheriff's Patrol Officers	5,557	6,876	1,319	2.15%
31-1011	Home Health Aides	935	1,155	220	2.14%
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	528	640	112	1.94%
39-3031	Ushers, Lobby Attendants, and Ticket Takers	504	610	106	1.93%
	Office and Adm. Support	14,246	17,586	3,340	2.13%
43-9031	Desktop Publishers	230	398	168	5.64%
43-4081	Hotel, Motel, and Resort Desk Clerks	697	986	289	3.53%
43-5061	Production, Planning, and Expediting Clerks	684	862	178	2.34%
43-9061	Office Clerks, General	12,635	15,340	2,705	1.96%
	Farm, Fishing and Forestry	3,439	4,711	1,272	3.20%
45-9099	Farming, Fishing, and Forestry Workers, All Other	3,439	4,711	1,272	3.20%

Occupational Projections 2000-2010 (cont.)

Table 13

Top 40 Fastest Growing Occupations with Growth over 100 Jobs - Washington PMSA

SOC	Occupational Group	2000	2010	Growth	Growth Rate
	Management Business and Financial Operations	24,345	33,603	9,258	3.28%
11-9031	Education Administrators, Preschool and Child Care Center/Program	1,318	2,069	751	4.61%
11-2022-0009	Sales Managers	7,097	9,744	2,647	3.22%
11-3021-0020	Computer and Information Systems Managers	15,930	21,790	5,860	3.18%
	Professional and Related	186,582	289,071	102,489	4.48%
15-1041-0109	Computer Support Specialists	15,298	27,545	12,247	6.06%
15-1032-0108	Computer Software Engineers, Systems Software	20,678	36,888	16,210	5.96%
15-1071-0111	Network and Computer Systems Administrators	11,017	19,569	8,552	5.91%
15-1031-0107	Computer Software Engineers, Applications	17,030	29,828	12,798	5.76%
15-1081-0112	Network Systems and Data Communications Analysts	5,532	9,071	3,539	5.07%
15-1061-0110	Database Administrators	7,604	12,318	4,714	4.94%
15-1099-0113	Computer Specialists, All Other	17,225	26,314	9,089	4.33%
27-2021-0389	Athletes and Sports Competitors	517	781	264	4.21%
29-1071-0449	Physician Assistants	988	1,470	482	4.05%
29-1121-0459	Audiologists	426	632	206	4.02%
25-2041-0344	Special Education Teachers, Preschool, Kindergarten, and Elementary School	2,895	4,174	1,279	3.73%
25-2011-0334	Preschool Teachers, Except Special Education	7,540	10,515	2,975	3.38%
15-1051-0105	Computer Systems Analysts	41,198	57,268	16,070	3.35%
29-2071-0495	Medical Records and Health Information Technicians	2,078	2,878	800	3.31%
21-1013-0255	Marriage and Family Therapists	331	458	127	3.30%
21-1021-0270	Child, Family, and School Social Workers	3,850	5,314	1,464	3.28%
21-1093-0265	Social and Human Service Assistants	5,878	8,076	2,198	3.23%
29-2021-0480	Dental Hygienists	2,776	3,784	1,008	3.15%
25-9041-0359	Teacher Assistants	23,721	32,188	8,467	3.10%
	Service	73,380	101,248	27,868	3.27%
39-9031-0637	Fitness Trainers and Aerobics Instructors	4,365	6,509	2,144	4.08%
39-9021-0635	Personal and Home Care Aides	3,401	4,962	1,561	3.85%
39-9011-0604	Child Care Workers	9,046	12,430	3,384	3.23%
39-3091-0611	Amusement and Recreation Attendants	2,833	3,821	988	3.04%
35-3021-0570	Combined Food Preparation and Serving Workers, Including Fast Food	38,959	52,881	13,922	3.10%
31-9092-0521	Medical Assistants	5,123	7,474	2,351	3.85%
31-9091-0508	Dental Assistants	4,455	6,075	1,620	3.15%
31-2022-0519	Physical Therapist Aides	629	908	279	3.74%
31-1013-0513	Psychiatric Aides	354	480	126	3.09%
31-1011-0511	Home Health Aides	4,215	5,708	1,493	3.08%
	Sales and Related	175	280	105	4.81%
41-2012-0657	Gaming Change Persons and Booth Cashiers	175	280	105	4.81%
	Office and Adm. Support	4,638	6,738	2,100	3.81%
43-9031-0737	Desktop Publishers	985	1,743	758	5.87%
43-4081-0705	Hotel, Motel, and Resort Desk Clerks	3,653	4,995	1,342	3.18%
	Construction and Extraction	4,260	5,868	1,608	3.25%
47-2211-0815	Sheet Metal Workers	4,260	5,868	1,608	3.25%
	Transport and Materials Moving	3,342	4,766	1,424	3.61%
53-4011-1091	Locomotive Engineers	201	352	151	5.76%
53-3011-1079	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	231	333	102	3.72%
53-3021-1082	Bus Drivers, Transit and Intercity	2,613	3669	1,056	3.45%
53-4031-1094	Railroad Conductors and Yardmasters	297	412	115	3.33%

Occupational Projections 2000-2010 (cont.)

Table 14
Fastest Growing Occupations with Growth over 100 Jobs Common to D.C. and PMSA

SOC	Occupational Group	D.C. Growth Rate	PMSA Growth Rate	2000	2010	D.C. Growth Rate	2000	2010	PMSA Growth Rate
	Management Business and Financial Operations								
11-2022-0009	Sales Managers	2.32%	3.22%	1,130	1,421	2.32%	7,097	9,744	3.22%
11-3021-0020	Computer and Information Systems Managers	3.24%	3.18%	3,078	4,235	3.24%	15,930	21,790	3.18%
15-1041-0109	Professional and Related Computer Support Specialists	5.73%	6.06%	2,651	4,629	5.73%	15,298	27,545	6.06%
15-1032-0108	Computer Software Engineers, Systems Software	7.17%	5.96%	1,597	3,191	7.17%	20,678	36,888	5.96%
15-1071-0111	Network and Computer Systems Administrators	4.83%	5.91%	1,508	2,416	4.83%	11,017	19,569	5.91%
15-1031-0107	Computer Software Engineers, Applications	6.13%	5.76%	733	1,329	6.13%	17,030	29,828	5.76%
15-1081-0112	Network Systems and Data Communications Analysts	5.22%	5.07%	836	1,390	5.22%	5,532	9,071	5.07%
15-1061-0110	Database Administrators	3.98%	4.94%	1,161	1,716	3.98%	7,604	12,318	4.94%
15-1099-0113	Computer Specialists, All Other	4.29%	4.33%	1,908	2,905	4.29%	17,225	26,314	4.33%
15-1051-0105	Computer Systems Analysts	2.96%	3.35%	9,245	12,377	2.96%	41,198	57,268	3.35%
21-1093-0265	Social and Human Service Assistants	2.61%	3.23%	2,185	2,828	2.61%	5,878	8,076	3.23%
39-9031-0637	Service Fitness Trainers and Aerobics Instructors	3.53%	4.08%	655	927	3.53%	4,365	6,509	4.08%
39-9021-0635	Personal and Home Care Aides	4.15%	3.85%	514	772	4.15%	3,401	4,962	3.85%
31-9092-0521	Medical Assistants	2.22%	3.85%	1,749	2,179	2.22%	5,123	7,474	3.85%
31-1011-0511	Home Health Aides	2.14%	3.08%	935	1,155	2.14%	4,215	5,708	3.08%
43-9031-0737	Office and Adm. Support Desktop Publishers	5.64%	5.87%	230	398	5.64%	985	1,743	5.87%
43-4081-0705	Hotel, Motel, and Resort Desk Clerks	3.53%	3.18%	697	986	3.53%	3,653	4,995	3.18%

Occupational Skill Levels

Occupational Skill Levels

Occupational projections afford a good opportunity to assess regional labor market skills and to forecast skill needs and training opportunities for coming years. Both the Washington, D.C. PMSA and its D.C. core have managerial, and professional occupations above the United States average. For example, lawyers make up 27,863 jobs in the District and 42,543 in the PMSA, employment representing a regional share more than 3 times the national share. Lawyers require three years of post graduate training. The Washington PMSA with its high share of professional employment already has a high skills labor economy. Forecasting skill needs for the future is an important component in labor market forecasts.

Skill Categories

BLS has developed a skills taxonomy that reflects the training and qualifications associated with data reported within its occupational categories. This taxonomy appears in **Exhibit 3** (pg. 30) below. The first seven BLS categories give the minimum of formal post-secondary education beyond high school that is required to enter and work in an occupation. The term required has a broad use. In some occupations the degree is absolutely necessary and a candidate will not be considered without the required degree. These include occupations where licensing is required by the state or by a private association empowered by the state. Registered nurses must have at least an associate's degree from an approved nursing program to be able to take state required exams. Without this credential entry is blocked.

In other occupations, a post-secondary degree is not strictly required but the skills needed before entry are such that a degree is strongly preferred by employers and candidates without a degree are much less likely to be considered, much less employed. Categories emphasize the sources and length of training preferred by employers. Training might be post-secondary vocational, college, postgraduate or professional education. The duration of training could range from a week or two to many years.

Prior experience and on the job training are part of the skills taxonomy. Category 4 is work experience plus a bachelor's or higher degree, an MBA

degree for example. Someone with an MBA in finance will probably be expected to have employment experience before being considered for a managerial position. Categories 8 and 9 describe skills learned through long-term on-the-job training, or work experience in a similar or related occupation. These jobs do not require a degree beyond high school, but are generally not entry-level jobs. For example, a first line supervisor of retail sales workers, or a supervisor of construction workers will need experience in retail sales or construction to be eligible for a job as a supervisor. These jobs require long term on the job training, meaning more than 12 months of experience. Therefore, entry level skills are a high school degree plus skills learned in another job or lower level job.

Categories 10 and 11 are moderate term and short-term on-the-job training. Moderate term on the job training is classified as skills which take 1 to 12 months to learn on the job while short term on the job training is classified as skills which take up to 1 month, but might be less. Moderate term and short term on the job training skills can be classified as general workforce employment. Therefore, entry level skills into these occupations are a high school degree.

Occupational Skill Levels (cont.)

Exhibit 3-Educational Training and Skills Categories

1. First Professional Degree	Entry into a job in this skill category requires 2 to 4 years of degree study beyond a baccalaureate degree. Almost all professionals must pass state licensing exams or private board certification exams to enter practice. Physicians, veterinarians, dentists, lawyers, pharmacists are all examples. Ministers are generally included here although there is not ordinarily board or state certification.
2. Doctorate Degree	Entry into a job in this skill category requires a doctorate following completion of a baccalaureate degree as minimum education for entry. College teaching at four year colleges is an example. A doctorate is also required for many science and medical research positions. Many require licenses and board exams. Medical and biological researchers, physicists, and astronomers are other examples because employment is mostly in research and these require doctorates.
3. Master's Degree	Entry into a job in this skill category typically requires license, certification, credentials or registry in a specialized skill area that requires work beyond a BA degree, leading to a master's degree. Health care professions such as physical therapists, speech-language audiology or pathology, counseling are examples. Librarians are now also included.
4. Master's or Bachelor's degree combined with previous experience	Entry into a job in this skill category requires formal education, but these jobs are usually not accessible without experienced practice in the field at an entry job. Health Services managers usually have experience working in health care in addition to degrees and credentials. Some businesses now require work experience and an MBA before jobs are accessible for entry. Almost all of these jobs have manager in the SOC title.
5. Bachelor's Degree	Entry into a job in this skill category requires a BA or BS degree. In some cases a BA degree in any field is satisfactory to establish reading and computational skills necessary to begin a job. Other jobs need a BA in a particular major to establish skills, credentials or obtain a license.
6. Associate Degree	Entry into a job in this skill category usually requires some formal education such as an educational internship, or co-op program, but leading to an associate's degree. Some employers require graduation from an accredited two year community or junior college program in order to take required licensing exams. Health technician occupations are examples. Some skill types have professional associations with certification or accreditation to help establish skill levels for job entrants. Dental hygienists, licensed practical nursing are examples.

Occupational Skill Levels (cont.)

Exhibit 3-Educational Training and Skills Categories (cont.)

7. Post-secondary Vocational Training	<p>Entry into a job in this skill category requires pre-employment skill training and often a license from a state agency. Barbers, hairstylists, office machine repairers, computer repair specialists and technicians are examples. Employers may provide some on-the-training but entrants must arrive with the skills and certification to do their job.</p>
8. Work Experience in a Related Occupation	<p>Entry into these jobs usually requires that applicants show a high level of skills. These skills can be acquired through degree training, but long term practice, and specialized talents acquired as part of a career in the field are necessary. It is a separate category because degrees and training do not assure entry into these occupations. First line supervisors, police detectives and investigators, adult education instructors are examples.</p>
9. Long-term On-The Job Training	<p>Entry into a job in this skill category typically requires skills acquired from work experience that takes longer than one year. The additional skills needed for the job are taught on the job, through an apprenticeship or employer sponsored classroom instruction or training, and the skills required take a long time or a lot of effort to learn with training of over a year. Actors, athletes, dancers, electricians, carpenters and mechanics are examples. Entry into these jobs are not open to those leaving a degree program or skills training. Prior job relevant skills are necessary for advancement into these positions. For many of these positions a high school degree maybe sufficient but entry is not available to high school graduates. Entry skills are high school plus on the job skills and experience.</p>
10. Moderate-term On-The Job Training	<p>Entry into these jobs usually requires basic reading and language skills learned in high school or a GED program, but additional on-the-job training is usually necessary. Additional skills can be learned quickly, but one to 12 months can be needed to acquire additional skills. Medical assistants, dental assistants, social and human resource assistants are examples.</p>
11. Short-term On-the Job Training	<p>Entry into these jobs usually requires basic reading and language skills learned in high school or a GED program. Work that can be learned from written or verbal instructions, or carried out successfully after a demonstration are classified as high school skills. Additional skills can be learned quickly, typically a month or less of on-the-job experience or instruction. High school degree skills can also be thought of as general workforce skills.</p>

Occupational Skill Levels (cont.)

Local Skills Employment

The discussion of skill requirements emphasizes entry level skills. This emphasis is important because job openings are the total of job growth and net replacements. Even though time on the job always improves skill and efficiency, job openings defined in this way are likely to be filled by new entrants to an occupation. Associating occupations with entry level skills makes it possible to compare existing and future employment by skill and to compute growth or openings by skill level. The 2000 national economy supported 145.59 million jobs; 29 percent of them required post secondary training or degree education for entry; 15.7 percent required a high school degree plus long term on the job training or work experience in a related occupation. Hence at least 44.7 percent of jobs are unavailable to new or inexperienced high school graduates. These figures and others appear in **Table 15** (pg. 34).

The distribution of employment for the United States by skill is not expected to change much between 2000 and 2010. Because of this relative stability projected job growth will not be evenly distributed among the necessary entry level skills. Only 4.6 percent of job growth, or 1 million jobs, will be for those with advanced degrees. Those with degrees and work experience, Category 4 above, can expect 6.4 percent of job growth, or about 1.4 million additional jobs. Job growth for baccalaureate degree candidates is expected to increase by around 4 million new jobs, and associate's degree candidates and those with postsecondary vocational training are expected to have about 2.98 million new jobs available. Together bachelor's and associate's degrees should make up 26.18 percent of job growth, with postsecondary vocational education adding another 5.46 percent. Still high school entry level jobs are expected to be the bulk of job growth with 10.6 million job growth, or 47.9 percent of the total.

Jobs in the Washington area have higher skill requirements than the national amounts as shown in **Table 15** (pg. 34). Washington has more Professional and Managerial occupations than the national economy: approximately 49 percent of District employment, 41 percent of PMSA employment and 29 percent of national employment. The share of jobs requiring post graduate education in the District is more than triple the national average, 9.9 to 3.3 percent, and roughly double the share in the PMSA, 9.9 to 5 percent. Projected growth rates by skill follow the same pattern.

Conversely, jobs with entry level high school skills are a significantly smaller share of D.C. and PMSA employment than national shares: 40.9 percent in the District, 46.2 percent in the PMSA, against 55.24 percent nationally. Projected growth rates follow this pattern as well. Only 23.15 percent of D.C. job growth is forecasted at the high school entry skill level. It rises to 35.5 percent for the PMSA. Both are well below the national projected percentage of growth, which is 47.9 percent.

Occupational Skill Levels (cont.)

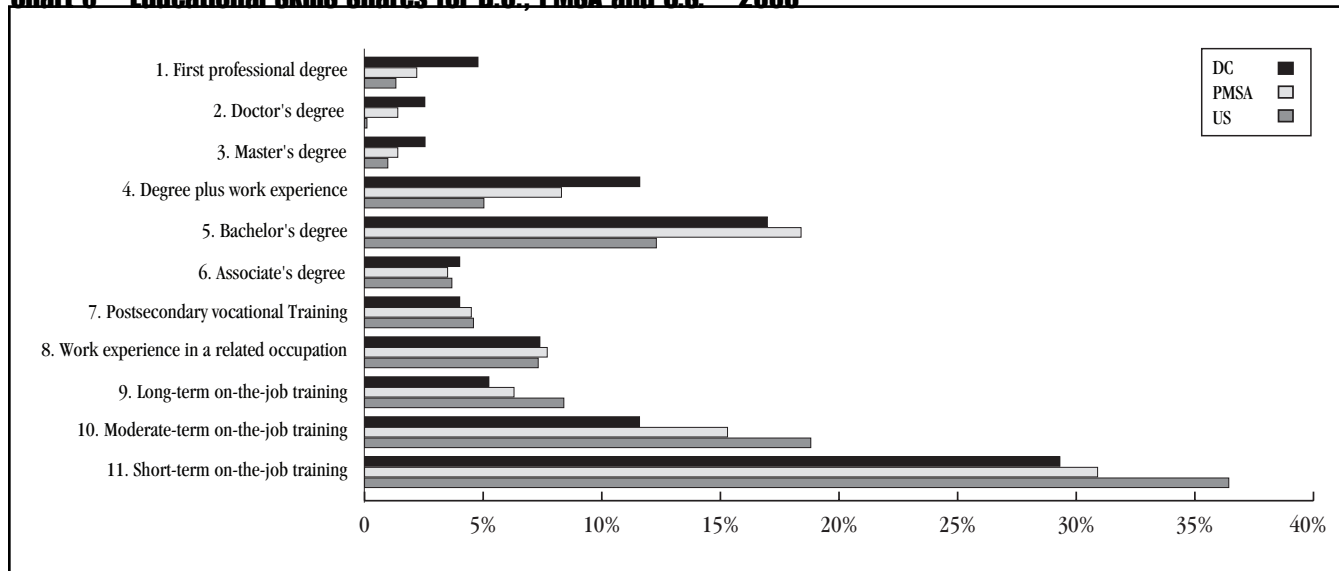
Skill Training Needs and Opportunities

Even though there is a high proportion of post graduate level employment in the Washington area, there is still a need for post secondary skills training. The smaller projected growth in high school general skills employment implies that significant numbers of new jobs will require postsecondary training. That is training beyond high school, but not necessarily leading to a BA degree. Job growth data supports this view. Growth in associate's degree and post secondary vocational training skill levels in the District and PMSA are comparable to national averages. Associate degree training is forecasted as an entry skill requirement for 8 percent of job growth nationally, 6.2 percent in the PMSA, and 7.65 percent in the District. Vocational skill training is forecasted as an entry skill requirement for 5.5 percent of job growth nationally, 5.8 percent in the PMSA and 5.24 percent in D.C..

These translate into annual job openings, growth plus replacement, of nearly 2000 jobs per year in the District for associates degree and vocational training positions combined. For the PMSA, openings are expected to be slightly less than 11,000 per year. Many of these openings are forecast for health care practitioners and support occupations:

- 1) registered, licensed practical and licensed vocational nurses,
- 2) radiation, respiratory, occupational and physical therapists, technicians and assistants,
- 3) cardiovascular, radiologic, surgical, psychiatric and nuclear medicine technologists and technicians,
- 4) diagnostic medical sonographers,
- 5) medical and clinical lab technicians,
- 6) dental hygienists,
- 7) medical records, medical transcriptionists and health information technicians,
- 8) emergency medical technicians and paramedics,
- 9) veterinary technologists and technicians. Computer support technologies are associates degree entry jobs that are expected to produce over 1,000 openings a year. With many higher skill computer jobs expected in the next decade retraining and upgrading computer skills will be an important need for job training.

Chart 6 – Educational Skills Shares for D.C., PMSA and U.S. – 2000



Occupational Skill Levels (cont.)

Table 15 - Employment and Growth by Education and Training Category

Ed Category	Number	2000	2000 Share	2010	2010 Share	Growth	Growth Share %
Washington, D.C.							
1. First professional degree	15	32,518	4.78%	37,534	5.01%	5,016	7.23%
2. Doctor's degree	50	17,246	2.54%	18,810	2.51%	1,564	2.26%
3. Master's degree	22	17,318	2.55%	18,771	2.50%	1,453	2.10%
4. Degree plus work experience	26	78,885	11.60%	91,576	12.22%	12,691	18.30%
5. Bachelor's degree	111	115,491	16.98%	133,177	17.77%	17,686	25.50%
6. Associate's degree	34	27,241	4.01%	32,549	4.34%	5,308	7.65%
7. Postsecondary vocational Training	45	27,285	4.01%	30,920	4.13%	3,635	5.24%
8. Work experience in a related occupation	43	50,279	7.39%	53,281	7.11%	3,002	4.33%
9. Long-term on-the-job training	68	35,665	5.24%	38,604	5.15%	2,939	4.24%
10. Moderate-term on-the-job training	97	78,805	11.59%	82,728	11.04%	3,923	5.66%
11. Short-term on-the-job training	136	199,309	29.31%	211,442	28.22%	12,133	17.50%
PMSA							
1. First professional degree	15	66,224	2.2%	81,049	2.3%	14,825	3.0%
2. Doctor's degree	51	40,738	1.4%	46,889	1.3%	6,151	1.2%
3. Master's degree	21	41,214	1.4%	47,166	1.4%	5,952	1.2%
4. Degree plus work experience	27	247,330	8.3%	292,728	8.4%	45,398	9.2%
5. Bachelor's degree	115	547,009	18.4%	682,113	19.6%	135,104	27.3%
6. Associate's degree	35	103,710	3.5%	134,383	3.9%	30,673	6.2%
7. Postsecondary vocational Training	53	133,936	4.5%	162,831	4.7%	28,895	5.8%
8. Work experience in a related occupation	47	230,281	7.7%	255,702	7.4%	25,421	5.1%
9. Long-term on-the-job training	89	188,476	6.3%	215,112	6.2%	26,636	5.4%
10. Moderate-term on-the-job training	169	457,311	15.3%	495,129	14.2%	37,818	7.6%
11. Short-term on-the-job training	146	919,780	30.9%	1,057,784	30.4%	138,004	27.8%
United States							
1. First professional degree	15	1,927	1.32%	2,270	1.35%	343	1.55%
2. Doctor's degree	54	1492	1.02%	1844	1.10%	352	1.59%
3. Master's degree	22	1,425	0.98%	1,759	1.05%	334	1.51%
4. Degree plus work experience	28	7,319	5.03%	8,740	5.21%	1,421	6.41%
5. Bachelor's degree	116	17,906	12.30%	21,936	13.08%	4,030	18.19%
6. Associate's degree	36	5,355	3.68%	7,126	4.25%	1,771	7.99%
7. Postsecondary vocational Training	53	6,678	4.59%	7,889	4.70%	1,211	5.46%
8. Work experience in a related occupation	51	10,656	7.32%	11,760	7.01%	1,104	4.98%
9. Long-term on-the-job training	91	12,237	8.40%	13,171	7.85%	934	4.21%
10. Moderate-term on-the-job training	176	27,379	18.81%	30,357	18.10%	2,978	13.44%
11. Short-term on-the-job training	137	53,042	36.43%	60,676	36.17%	7,634	34.45%

Source: D.C. Dept. of Employment Services 2000-2010 Projections and Monthly Labor Review, Nov 2001

Appendix

Standard Occupational Classifications

The SOC is a four level hierarchy of occupations that uses a 6 digit code for purposes of classification and data reporting.

The first two digits are for major group classifications. There are 23 major groups and major groups are coded to end with four zeros. The third digit of the code is used to designate 96 minor groups which are subgroups of the 23 major groups. Minor group codes end with three zeros. The fourth and fifth digits of the code designate 449 broad occupations which are subgroups of the minor groups. Broad occupation codes end with one zero. Finally, the sixth digit in the code designates one of 821 detailed occupations. Detailed occupations never end with zeros, although they may have a zero in them.

The 23rd major group and its three minor groups, three broad occupations and 22 detailed occupations are military occupations only. Sometimes in the minor groups, as is the case with the military, there is only one broad occupation for a minor group. In other broad occupations there might be only one detailed occupation.

After allowing for the military, there are 799 detailed domestic occupations. For example, occupational therapists are in the Major group, code 29-0000, which is Healthcare Practitioners and Technical Occupations, and a minor group, code 29-1000, which is Health Diagnosing and Treating Practitioners, and a broad occupation, code 29-1120, which is therapists. Finally, the detailed occupation, code 29-1122, is occupational therapist. Where there is a 9 in the code it is a residual occupation containing all occupations within a major, minor or broad group that are typically classified as other.

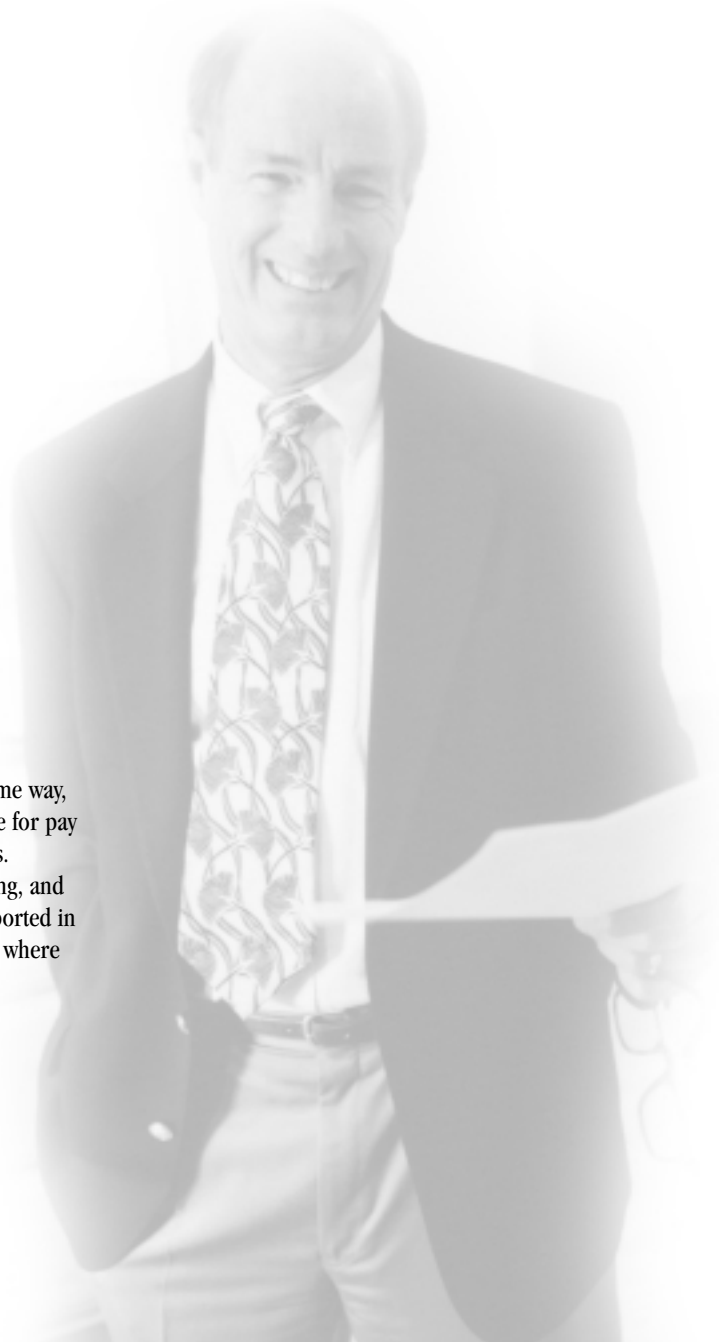


Appendix (cont.)

The data collected and reported under the Standard Classification System is grouped further under non coded headings for occupational coverage that BLS reports in its Occupational Outlook Handbook. The 22 SOC major groups(which excludes the military) are subheadings under the 10 Occupational categories listed below. Only the first three of the 10 headings have multiple SOC categories.

1. Management, Business and Financial Operations Occupations
 - 11-0000 Management Occupations
 - 13-0000 Business and Financial Operations Occupations
2. Professional and Related Occupations
 - 15-0000 Computer and Mathematical Occupations
 - 17-0000 Architecture and Engineering Occupations
 - 19-0000 Life, Physical, and Social Science Occupations
 - 21-0000 Community and Social Service Occupations
 - 23-0000 Legal Occupations
 - 25-0000 Education, Training and Library Occupations
 - 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
 - 29-0000 Healthcare Practitioners and Technical Occupations
3. Service Occupations
 - 31-0000 Health Support Occupations
 - 33-0000 Protective Service Occupations
 - 35-0000 Food Preparation and Serving Related Occupations
 - 37-0000 Building and Grounds Cleaning and Maintenance Occupations
 - 39-0000 Personal Care and Service Occupations
4. Sales and Related Occupations
 - 41-0000 Sales and Related Occupations
5. Office and Administrative Support Occupations
 - 43-0000 Office and Administrative Support Occupations
6. Farming, Fishing, and Forestry Occupations
 - 45-0000 Farming, Fishing and Forestry Occupations
7. Construction Trades and Related Workers
 - 47-0000 Construction and Extraction Occupations
8. Installation, Maintenance and Repair Occupations
 - 49-0000 Installation, Maintenance and Repair Occupations
9. Production Occupations
 - 51-0000 Production Occupations
10. Transportation and Material Moving Occupations
 - 53-0000 Transportation and Material Moving Occupations

In order to ensure that all users of occupational data classify workers the same way, specific principles of data collection are followed. The data covers all work done for pay or profit including uncompensated family members working in a family business. Occupations are classified based upon work performed, skills, education, training, and credentials. Workers that may be classified in more than one occupation are reported in the occupation with the highest skill. If skills are equal, employment is reported where they spend the most time.



Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
	Total All Industries	680,042	749,292	100.0%	69,250	0.97%
070	Agricultural Services	267	335	0.04%	68	2.29%
074	Veterinarian Services	162	225	0.02%	63	3.34%
078	Landscape and Horticultural Services	105	110	0.02%	5	0.47%
A	Agriculture, Forestry, and Fishing, Total	267	335	0.04%	68	2.29%
130	Oil and Gas Extraction, Total	***	***	***	***	***
131	Crude Petroleum and Natural Gas	***	***	***	***	***
138	Oil and Gas Field Services	***	***	***	***	***
B	Mining, Total	***	***	***	***	***
150	General Building Contractors, Total	3,398	4,016	0.50%	618	1.69%
152	Residential Building Construction	1,592	2,013	0.23%	421	2.37%
153	Operative Building	***	***	***	***	***
154	Nonresidential Building Construction	1,690	1,867	0.25%	177	1.00%
160	General Contractors, Except Building, Total	1,774	2,016	0.26%	242	1.29%
161	Highway and Street Construction	***	***	***	***	***
162	Heavy Construction, Except Highway	591	635	0.09%	44	0.72%
170	Special Trade Contractors, Total	5,747	5,895	0.85%	148	0.25%
171	Plumbing, Heating, Air Conditioning	1,121	1,211	0.16%	90	0.78%
172	Painting and Paper Hanging	***	***	***	***	***
173	Electrical Work	1,411	1,513	0.21%	102	0.70%
174	Masonry, Stonework, and Plastering	***	***	***	***	***
175	Carpentry and Floor Work	***	***	***	***	***
176	Roofing, Siding and Sheet Metal Work	***	***	***	***	***
177	Concrete Work	***	***	***	***	***
178	Water Well Drilling	7	7	0.00%	0	0.00%
179	Miscellaneous Special Trade Contractors	1,495	1,348	0.22%	-147	-1.03%
C	Construction, Total	10,919	11,927	1.61%	1,008	0.89%
D	Manufacturing, Total	11,387	11,369	1.67%	-18	-0.02%
240	Lumber and Wood Products, Total	***	***	***	***	***
243	Millwork, Plywood, and Structural Members	***	***	***	***	***
250	Furniture and Fixtures, Total	***	***	***	***	***
251	Household Furniture	***	***	***	***	***
320	Stone, Clay, and Glass Total	***	***	***	***	***
325	Structural Clay Products	***	***	***	***	***
327	Concrete, Gypsum, and Plaster Products	***	***	***	***	***
330	Primary Metal Industries, Total	13	11	0.00%	-2	-1.66%
331	Blast Furnace and Basic Steel Products	13	11	0.00%	-2	-1.66%
340	Fabricated Metal Products, Total	***	***	***	***	***
344	Fabricated Structural Metal Products	***	***	***	***	***
347	Metal Services, n.e.c.	***	***	***	***	***
350	Industrial Machinery and Equipment, Total	***	***	***	***	***
353	Construction and Related Machinery	***	***	***	***	***
357	Computer and Office Equipment	***	***	***	***	***
360	Electronic and Other Electrical Equipment, Total	***	***	***	***	***
365	Household Audio and Video Equipment	***	***	***	***	***
366	Communications Equipment	***	***	***	***	***
367	Electronic Components and Accessories	***	***	***	***	***
369	Miscellaneous Electrical Equipment and Supplies	***	***	***	***	***

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
370	Transportation Equipment, Total	***	***	***	***	***
372	Aircraft and Parts	***	***	***	***	***
373	Ship and Boat Building and Repairing	***	***	***	***	***
374	Railroad Equipment	***	***	***	***	***
376	Guided Missiles, Space Vehicles, Parts	***	***	***	***	***
380	Instruments and Related Products, Total	***	***	***	***	***
382	Measuring and Controlling Devices	***	***	***	***	***
384	Medical Instruments and Supplies	***	***	***	***	***
390	Miscellaneous Manufacturing Industries, Total	***	***	***	***	***
395	Pens, Pencils, Office and Art Supplies	***	***	***	***	***
396	Costume Jewelry and Notions	***	***	***	***	***
399	Miscellaneous Manufacturers	***	***	***	***	***
D1	Durable Goods Manufacturing, Total	948	982	0.14%	34	0.35%
200	Food and Kindred Products, Total	***	***	***	***	***
203	Preserved Fruits and Vegetables	***	***	***	***	***
204	Grain Mill Products	***	***	***	***	***
205	Bakery Products	***	***	***	***	***
208	Beverages	***	***	***	***	***
209	Miscellaneous Foods and Kindred Products	***	***	***	***	***
220	Textile Mill Products, Total	***	***	***	***	***
225	Knitting Mills	***	***	***	***	***
230	Apparel and Textile Products, Total	***	***	***	***	***
232	Men's and Boy's Furnishings	***	***	***	***	***
235	Hats, Caps, and Millinery	***	***	***	***	***
260	Paper and Allied Products, Total	***	***	***	***	***
267	Miscellaneous Converted Paper Products	***	***	***	***	***
270	Printing and Publishing, Total	9,837	9,793	1.45%	-44	-0.04%
271	Newspapers	4,139	3,806	0.61%	-333	-0.84%
272	Periodicals	3,943	4,151	0.58%	208	0.52%
273	Books	***	***	***	***	***
274	Miscellaneous Publishing	***	***	***	***	***
275	Commercial Printing	1,080	1,194	0.16%	114	1.01%
276	Manifold Business Forms	11	12	0.00%	1	0.87%
277	Greeting Card Publishing	***	***	***	***	***
278	Blankbooks and Bookbinding	***	***	***	***	***
279	Printing Trade Services	***	***	***	***	***
280	Chemicals and Allied Products, Total	205	226	0.03%	21	0.98%
281	Industrial Inorganic Chemicals	***	***	***	***	***
282	Plastics Materials and Synthetics	25	36	0.00%	11	3.71%
283	Drugs	***	***	***	***	***
284	Soap, Cleaners, and Toilet Goods	11	11	0.00%	0	0.00%
289	Miscellaneous Chemical Products	***	***	***	***	***
290	Petroleum and Coal Products, Total	***	***	***	***	***
291	Petroleum Refining	***	***	***	***	***
299	Miscellaneous Petroleum And Coal Products	***	***	***	***	***
D2	Nondurable Goods Manufacturing, Total	10,439	10,387	1.54%	-52	-0.05%
E	Transportation and Public Utilities	26,645	27,443	3.92%	798	0.30%
400	Railroad Transportation, Total	***	***	***	***	***

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
401	Railroad Transportation	***	***	***	***	***
410	Local and Interurban Transit, Total	1,353	1,655	0.20%	302	2.04%
411	Local and Suburban Transportation	891	1,106	0.13%	215	2.19%
412	Taxicabs	***	***	***	***	***
413	Intercity and Rural Bus Transportation	***	***	***	***	***
414	Bus Charter Service	***	***	***	***	***
415	School Buses	13	9	0.00%	-4	-3.61%
420	Trucking and Warehousing, Total	***	***	***	***	***
421	Trucking and Courier Services, Except Air	***	***	***	***	***
422	Public Warehousing and Storage	***	***	***	***	***
430	U.S. Postal Service, Total	7,745	7,655	1.14%	-90	-0.12%
431	U.S. Postal Service	7,745	7,655	1.14%	-90	-0.12%
440	Water Transportation, Total	***	***	***	***	***
441	Deep Sea Foreign Transportation of Freight	***	***	***	***	***
448	Water Transportation of Passengers	***	***	***	***	***
449	Water Transportation Services	***	***	***	***	***
450	Transportation by Air, Total	831	961	0.12%	130	1.46%
451	Air Transportation, Scheduled	680	825	0.10%	145	1.95%
452	Air Transportation, Nonscheduled	***	***	***	***	***
458	Airports, Flying Fields, and Services	124	104	0.02%	-20	-1.74%
470	Transportation Services, Total	1,819	2,045	0.27%	226	1.18%
472	Passenger Transportation Arrangement	1,036	1,285	0.15%	249	2.18%
473	Freight Transportation Arrangement	***	***	***	***	***
474	Rental of Railroad Cars	***	***	***	***	***
478	Miscellaneous Transportation Services	2	2	0.00%	0	0.00%
0	Transportation, Total	13,709	14,339	2.02%	630	0.45%
480	Communications, Total	8,893	9,312	1.31%	419	0.46%
481	Telephone Communications	3,305	2,220	0.49%	-1,085	-3.90%
482	Telegraph and Other Communications	***	***	***	***	***
483	Radio and Television Broadcasting	4,603	5,700	0.68%	1,097	2.16%
484	Cable and Other Pay TV Services	***	***	***	***	***
489	Communication Services, n.e.c.	***	***	***	***	***
490	Utilities and Sanitary Services, Total	4,043	3,792	0.59%	-251	-0.64%
491	Electric Services	***	***	***	***	***
492	Gas Production and Distribution	***	***	***	***	***
493	Combination Utility Services	31	28	0.00%	-3	-1.01%
495	Sanitary Services	***	***	***	***	***
00	Communications and Utilities, Total	12,936	13,104	1.90%	168	0.13%
FG	Wholesale and Retail Trade, Total	51,698	52,365	7.60%	667	0.13%
500	Wholesale Trade, Durable Goods, Total	2,932	2,270	0.43%	-662	-2.53%
501	Motor Vehicles, Parts and Supplies	190	94	0.03%	-96	-6.80%
502	Furniture and Home Furnishings	213	218	0.03%	5	0.23%
503	Lumber and Construction Materials	***	***	***	***	***
504	Professional and Commercial Equipment	1,382	1,175	0.20%	-207	-1.61%
505	Metals and Minerals, Except Petroleum	9	6	0.00%	-3	-3.97%
506	Electrical Goods	705	484	0.10%	-221	-3.69%
507	Hardware, Plumbing, and Heating Equipment	205	145	0.03%	-60	-3.40%
508	Machinery, Equipment, and Supplies	***	***	***	***	***

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
509	Miscellaneous Durable Goods	***	***	***	***	***
510	Wholesale Trade, Nondurable Goods, Total	2,628	2,724	0.39%	96	0.36%
511	Paper and Paper Products	***	***	***	***	***
512	Drugs, Proprietarys, and Sundries	166	154	0.02%	-12	-0.75%
513	Apparel, Piece Goods, and Notions	122	122	0.02%	0	0.00%
514	Groceries and Related Products	989	1,048	0.15%	59	0.58%
515	Farm-Product Raw Materials	33	32	0.00%	-1	-0.31%
516	Chemicals and Allied Products	***	***	***	***	***
517	Petroleum and Petroleum Products	***	***	***	***	***
518	Beer, Wine, and Distilled Beverages	638	704	0.09%	66	0.99%
519	Miscellaneous Nondurable Goods	523	521	0.08%	-2	-0.04%
F	Wholesale Trade, Total	5,560	4,994	0.82%	-566	-1.07%
520	Building Materials and Garden Supplies, Total	266	271	0.04%	5	0.19%
521	Lumber and Other Building Materials	***	***	***	***	***
523	Paint, Glass, and Wallpaper Stores	***	***	***	***	***
525	Hardware Stores	166	165	0.02%	-1	-0.06%
530	General Merchandise Stores, Total	1,204	824	0.18%	-380	-3.72%
531	Department Stores	***	***	***	***	***
533	Variety Stores	190	121	0.03%	-69	-4.41%
539	Miscellaneous General Merchandise Stores	***	***	***	***	***
540	Food Stores, Total	4,928	5,138	0.72%	210	0.42%
541	Grocery Stores	4,009	4,067	0.59%	58	0.14%
542	Meat and Fish Markets	124	137	0.02%	13	1.00%
543	Fruit and Vegetable Markets	***	***	***	***	***
544	Candy, Nut, and Confectionery Stores	***	***	***	***	***
545	Dairy Products Stores	***	***	***	***	***
546	Retail Bakeries	632	771	0.09%	139	2.01%
549	Miscellaneous Food Stores	***	***	***	***	***
550	Auto Dealers and Service Stations, Total	934	950	0.14%	16	0.17%
551	New and Used Car Dealers	***	***	***	***	***
552	Used Car Dealers	***	***	***	***	***
553	Auto and Home Supply Stores	139	99	0.02%	-40	-3.34%
554	Gasoline Service Stations	570	592	0.08%	22	0.38%
555	Boat Dealers	11	6	0.00%	-5	-5.88%
560	Apparel and Accessories Stores, Total	3,312	3,331	0.49%	19	0.06%
561	Men's and Boy's Clothing Stores	209	202	0.03%	-7	-0.34%
562	Women's Clothing Stores	615	639	0.09%	24	0.38%
563	Women's Accessory and Specialty Stores	241	250	0.04%	9	0.37%
564	Children's and Infant's Wear Stores	42	47	0.01%	5	1.13%
565	Family Clothing Stores	1,521	1,553	0.22%	32	0.21%
566	Shoe Stores	453	431	0.07%	-22	-0.50%
569	Miscellaneous Apparel and Accessory Stores	231	209	0.03%	-22	-1.00%
570	Furniture and Homefurnishings Stores, Total	1,186	1,349	0.17%	163	1.30%
571	Furniture and Homefurnishings Stores	647	710	0.10%	63	0.93%
572	Household Appliance Stores	***	***	***	***	***
573	Radio, Television, and Computer Stores	505	606	0.07%	101	1.84%
580	Eating and Drinking Places, Total	28,217	29,305	4.15%	1,088	0.38%
581	Eating and Drinking Places	28,217	29,305	4.15%	1,088	0.38%

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
590	Miscellaneous Retail Stores, Total	6,090	6,202	0.90%	112	0.18%
591	Drug Stores and Proprietary Stores	1,667	1,794	0.25%	127	0.74%
592	Liquor Stores	694	594	0.10%	-100	-1.54%
593	Used Merchandise Stores	192	194	0.03%	2	0.10%
594	Miscellaneous Shopping Goods Stores	2,147	2,233	0.32%	86	0.39%
596	Nonstore Retailers	***	***	***	***	***
598	Fuel Dealers	15	8	0.00%	-7	-6.09%
599	Retail Stores, n.e.c.	1,250	1,241	0.18%	-9	-0.07%
G	Retail Trade, Total	46,138	47,371	6.78%	1,233	0.26%
600	Depository Institutions, Total	4,212	4,367	0.62%	155	0.36%
602	Commercial Banks	2,351	2,453	0.35%	102	0.43%
603	Saving Institutions	501	504	0.07%	3	0.06%
606	Credit Unions	967	967	0.14%	0	0.00%
608	Foreign Bank Branches and Agencies	***	***	***	***	***
609	Functions Closely Related To Banking	***	***	***	***	***
610	Nondepository Institutions, Total	3,569	3,998	0.52%	429	1.14%
611	Federal and Fed-sponsored Credit	***	***	***	***	***
614	Personal Credit Institutions	***	***	***	***	***
615	Business Credit Institutions	***	***	***	***	***
616	Mortgage Bankers and Brokers	212	228	0.03%	16	0.73%
620	Security and Commodity Brokers, Total	3,159	3,696	0.46%	537	1.58%
621	Security Brokers and Dealers	2,383	2,854	0.35%	471	1.82%
622	Commodity Contracts Brokers, Dealers	***	***	***	***	***
623	Security and Commodity Exchanges	***	***	***	***	***
628	Security and Commodity Services	***	***	***	***	***
630	Insurance Carriers, Total	6,933	6,897	1.02%	-36	-0.05%
631	Life Insurance	***	***	***	***	***
632	Medical Service and Health Insurance	4,354	4,403	0.64%	49	0.11%
633	Fire, Marine, and Casualty Insurance	169	166	0.02%	-3	-0.18%
635	Surety Insurance	***	***	***	***	***
636	Title Insurance	***	***	***	***	***
637	Pension, Health, and Welfare Funds	1,540	1,625	0.23%	85	0.54%
640	Insurance Agents, Brokers, and Services, Total	881	968	0.13%	87	0.95%
641	Insurance Agents, Brokers, and Services	881	968	0.13%	87	0.95%
650	Real Estate, Total	10,621	12,317	1.56%	1,696	1.49%
651	Real Estate Operators and Lessors	3,840	4,085	0.56%	245	0.62%
653	Real Estate Agents and Managers	6,020	7,409	0.89%	1,389	2.10%
654	Title Abstract Offices	232	275	0.03%	43	1.71%
655	Subdividers and Developers	529	548	0.08%	19	0.35%
670	Holding and Other Investment Offices, Total	2,864	3,485	0.42%	621	1.98%
671	Holding Offices	652	1,146	0.10%	494	5.80%
672	Investment Offices	***	***	***	***	***
673	Trusts	1,915	1,985	0.28%	70	0.36%
679	Miscellaneous Investing	***	***	***	***	***
H	Finance, Insurance, and Real Estate, Total	32,239	35,728	4.74%	3,489	1.03%
700	Hotels and Other Lodging Places, Total	13,994	17,300	2.06%	3,306	2.14%
701	Hotels and Motels	13,902	17,210	2.04%	3,308	2.16%
702	Rooming and Boarding Houses	88	87	0.01%	-1	-0.11%

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
704	Membership-Basis Organization Hotels	***	***	***	***	***
720	Personal Services, Total	3,198	3,313	0.47%	115	0.35%
721	Laundry, Cleaning, and Garment Services	1,001	1,001	0.15%	0	0.00%
722	Photographic Studios, Portrait	56	76	0.01%	20	3.10%
723	Beauty Shops	1,336	1,360	0.20%	24	0.18%
724	Barber Shops	91	118	0.01%	27	2.63%
725	Shoe Repair and Shoe Shine Parlors	***	***	***	***	***
726	Funeral Service and Crematories	163	115	0.02%	-48	-3.43%
729	Miscellaneous Personal Services	528	625	0.08%	97	1.70%
730	Business Services, Total	54,545	72,222	8.02%	17,677	2.85%
731	Advertising	877	953	0.13%	76	0.83%
732	Credit Reporting and Collection	72	120	0.01%	48	5.24%
733	Mailing, Reproduction, and Stenographic Services	2,822	3,974	0.41%	1,152	3.48%
734	Services to Buildings	12,799	14,930	1.88%	2,131	1.55%
735	Miscellaneous Equipment Rental and Leasing	598	749	0.09%	151	2.28%
736	Personnel Supply Services	13,729	18,050	2.02%	4,321	2.77%
737	Computer and Data Processing Services	13,273	21,284	1.95%	8,011	4.84%
738	Miscellaneous Business Services	10,368	12,152	1.52%	1,784	1.60%
750	Auto Repair Services and Parking, Total	3,182	3,255	0.47%	73	0.23%
751	Automotive Rentals, No Drivers	161	127	0.02%	-34	-2.34%
752	Automobile Parking	2,405	2,427	0.35%	22	0.09%
753	Automobile Repair Shops	395	434	0.06%	39	0.95%
754	Automobile Services, Except Repair	221	267	0.03%	46	1.91%
760	Miscellaneous Repair Services, Total	273	219	0.04%	-54	-2.18%
762	Electrical Repair Shops	***	***	***	***	***
763	Watch, Clock, and Jewelry Repair	***	***	***	***	***
764	Reupholstery and Furniture Repair	31	28	0.00%	-3	-1.01%
769	Miscellaneous Repair Shops	184	136	0.03%	-48	-2.98%
780	Motion Pictures	1,845	2,097	0.27%	252	1.29%
781	Motion Picture Production and Services	1,136	1,423	0.17%	287	2.28%
782	Motion Picture Distribution and Services	***	***	***	***	***
783	Motion Picture Theaters	***	***	***	***	***
784	Video Tape Rental	268	286	0.04%	18	0.65%
790	Amusement and Recreation Services, Total	4,686	5,989	0.69%	1,303	2.48%
791	Dance Studios, Schools, and Halls	***	***	***	***	***
792	Producers, Orchestras, Entertainers	1,148	1,242	0.17%	94	0.79%
794	Commercial Sports	***	***	***	***	***
799	Miscellaneous Amusement and Recreation Services	2,038	2,774	0.30%	736	3.13%
800	Health Services	42,513	43,898	6.25%	1,385	0.32%
801	Offices and Clinics, Medical Doctors	4,471	5,000	0.66%	529	1.12%
802	Offices and Clinics, Dentists	***	***	***	***	***
804	Offices, Other Health Practitioners	***	***	***	***	***
805	Nursing and Personal Care Facilities	3,938	4,612	0.58%	674	1.59%
806	Hospitals	29,331	28,996	4.31%	-335	-0.11%
807	Medical and Dental Laboratories	***	***	***	***	***
808	Home Health Care Services	615	992	0.09%	377	4.90%
809	Health and Allied Services, n.e.c.	2,231	2,359	0.33%	128	0.56%

Appendix (cont.)

Appendix Table 1 – D.C. Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
810	Legal Services, Total	33,594	43,151	4.94%	9,557	2.54%
811	Legal Services	33,594	43,151	4.94%	9,557	2.54%
820	Educational Services, Total	43,929	44,169	6.46%	240	0.05%
821	Elementary and Secondary Schools	13,754	14,051	2.02%	297	0.21%
822	Colleges and Universities	27,625	27,334	4.06%	-291	-0.11%
823	Libraries	228	236	0.03%	8	0.35%
824	Vocational Schools	345	432	0.05%	87	2.27%
829	Schools and Educational Services, n.e.c.	1,950	2,077	0.29%	127	0.63%
830	Social Services, Total	19,377	23,325	2.85%	3,948	1.87%
832	Individual and Family Services	4,073	4,768	0.60%	695	1.59%
833	Job Training and Related Services	2,344	2,761	0.34%	417	1.65%
835	Child Day Care Services	2,615	3,329	0.38%	714	2.44%
836	Residential Care	3,209	4,577	0.47%	1,368	3.61%
839	Social Services, n.e.c.	7,136	7,890	1.05%	754	1.01%
840	Museums, Botanical, Zoological Garden, Total	646	790	0.09%	144	2.03%
841	Museums and Art Galleries	646	790	0.09%	144	2.03%
860	Membership Organizations, Total	38,075	43,040	5.60%	4,965	1.23%
861	Business Associations	10,453	10,288	1.54%	-165	-0.16%
862	Professional Organizations	9,591	12,055	1.41%	2,464	2.31%
863	Labor Organizations	4,879	5,307	0.72%	428	0.84%
864	Civic and Social Associations	3,366	3,176	0.49%	-190	-0.58%
865	Political Organizations	1,309	1,542	0.19%	233	1.65%
866	Religious Organizations	***	***	***	***	***
869	Membership Organizations, n.e.c.	1,325	1,383	0.19%	58	0.43%
870	Engineering and Management Services, Total	45,329	51,696	6.67%	6,367	1.32%
871	Engineering and Architectural Services	5,539	7,261	0.81%	1,722	2.74%
872	Accounting, Auditing, and Bookkeeping	4,591	3,803	0.68%	-788	-1.87%
873	Research And Testing Services	16,970	19,876	2.50%	2,906	1.59%
874	Management and Public Relations	18,229	20,756	2.68%	2,527	1.31%
882	Self-Employed and Unpaid Family Workers	39,302	39,744	5.78%	442	0.11%
890	Services, n.e.c. - Total	943	1,303	0.14%	360	3.29%
899	Services, n.e.c.	943	1,303	0.14%	360	3.29%
I	Services, Total	306,332	355,939	45.05%	49,607	1.51%
901	Federal Government, Except Postal	175,544	186,294	25.81%	10,750	0.60%
902	State Government, Except Education and Hospitals	***	***	***	***	***
910	Federal Government	175,544	176,294	25.81%	750	0.04%
920	State Government, Except Education and Hospitals	***	***	***	***	***
J	Government, Total	201,203	204,391	29.59%	3,188	0.16%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
0	Total All Industries	2,979,463	3,475,017	100.00%	485,554	1.55%
010	Crops, Livestock and Livestock Products	2,608	3,072	0.09%	464	1.65%
070	Agricultural Services	18,967	24,942	0.64%	5,975	2.78%
071	Soil Preparation Services	***	***	***	***	***
072	Crop Services	***	***	***	***	***
074	Veterinarian Services	4,631	6,114	0.16%	1,483	2.82%
075	Animal Services, Except Veterinary	1,327	1,634	0.04%	307	2.10%
076	Farm Labor and Management Services	***	***	***	***	***
078	Landscape and Horticultural Services	12,850	16,947	0.43%	4,097	2.81%
080	Forestry	48	68	0.00%	20	3.54%
085	Forestry Services	48	68	0.00%	20	3.54%
090	Fishing, Hunting, and Trapping	33	52	0.00%	19	4.65%
097	Hunting, Trapping, Game Propagation	33	52	0.00%	19	4.65%
A	Agriculture, Forestry, and Fishing, Total	21,656	28,134	0.73%	6,478	2.65%
100	Metal Mining, Total	5	6	0.00%	1	1.84%
109	Miscellaneous Metal Ores	5	6	0.00%	1	1.84%
120	Coal Mining, Total	***	***	***	***	***
122	Bituminous Coal And Lignite Mining	***	***	***	***	***
130	Oil and Gas Extraction, Total	***	***	***	***	***
131	Crude Petroleum and Natural Gas	***	***	***	***	***
138	Oil and Gas Field Services	***	***	***	***	***
140	Nonmetallic Minerals, Except Fuels	919	1,033	0.03%	114	1.18%
141	Dimension Stone	***	***	***	***	***
142	Crushed and Broken Stone	576	619	0.02%	43	0.72%
144	Sand and Gravel	320	400	0.01%	80	2.26%
148	Nonmetallic Minerals Services	16	10	0.00%	-6	-4.59%
B	Mining, Total	1,153	1,280	0.04%	127	1.05%
150	General Building Contractors, Total	37,742	42,838	1.27%	5,096	1.27%
152	Residential Building Construction	19,480	21,733	0.65%	2,253	1.10%
153	Operative Building	2,370	2,629	0.08%	259	1.04%
154	Nonresidential Building Construction	15,892	18,476	0.53%	2,584	1.52%
160	General Contractors, Except Building, Total	16,388	19,758	0.55%	3,370	1.89%
161	Highway and Street Construction	5,140	5,961	0.17%	821	1.49%
162	Heavy Construction, Except Highway	11,248	13,797	0.38%	2,549	2.06%
170	Special Trade Contractors, Total	97,666	112,010	3.28%	14,344	1.38%
171	Plumbing, Heating, Air Conditioning	23,324	28,659	0.78%	5,335	2.08%
172	Painting and Paper Hanging	5,452	6,245	0.18%	793	1.37%
173	Electrical Work	21,093	23,426	0.71%	2,333	1.05%
174	Masonry, Stonework, and Plastering	13,947	16,120	0.47%	2,173	1.46%
175	Carpentry and Floor Work	5,478	5,236	0.18%	-242	-0.45%
176	Roofing, Siding and Sheet Metal Work	4,527	5,538	0.15%	1,011	2.04%
177	Concrete Work	9,077	10,062	0.30%	985	1.04%
178	Water Well Drilling	274	285	0.01%	11	0.39%
179	Miscellaneous Special Trade Contractors	14,494	16,439	0.49%	1,945	1.27%
C	Construction, Total	151,796	174,606	5.09%	22,810	1.41%
D	Manufacturing, Total	101,111	113,901	3.39%	12,790	1.20%
240	Lumber and Wood Products, Total	4,346	5607	0.15%	1,261	2.58%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
241	Logging	144	191	0.00%	47	2.86%
242	Sawmills and Planing Mills	347	402	0.01%	55	1.48%
243	Millwork, Plywood, and Structural Members	2,848	3,629	0.10%	781	2.45%
244	Wood Containers	189	223	0.01%	34	1.67%
245	Wood Buildings and Mobile Homes	498	694	0.02%	196	3.37%
249	Miscellaneous Wood Products	320	468	0.01%	148	3.87%
250	Furniture and Fixtures, Total	1,680	2,187	0.06%	507	2.67%
251	Household Furniture	959	1,105	0.03%	146	1.43%
252	Office Furniture	80	100	0.00%	20	2.26%
254	Partitions and Fixtures	545	905	0.02%	360	5.20%
259	Miscellaneous Furniture And Fixtures	***	***	***	***	***
320	Stone, Clay, and Glass Total	5,065	5,830	0.17%	765	1.42%
322	Glass and Glassware, Pressed or Blown	***	***	***	***	***
323	Products of Purchased Glass	***	***	***	***	***
324	Cement, Hydraulic	***	***	***	***	***
325	Structural Clay Products	***	***	***	***	***
326	Pottery and Related Products	***	***	***	***	***
327	Concrete, Gypsum, And Plaster Products	3,286	3,901	0.11%	615	1.73%
328	Cut Stone and Stone Products	***	***	***	***	***
329	Miscellaneous Nonmetallic Mineral Products	***	***	***	***	***
330	Primary Metal Industries, Total	1,351	1,274	0.05%	-77	-0.59%
331	Blast Furnace and Basic Steel Products	169	234	0.01%	65	3.31%
332	Iron and Steel Foundries	122	115	0.00%	-7	-0.59%
333	Primary Nonferrous Metals	742	686	0.02%	-56	-0.78%
334	Secondary Nonferrous Metals	***	***	***	***	***
335	Nonferrous Rolling And Drawing	***	***	***	***	***
336	Nonferrous Foundries (castings)	***	***	***	***	***
340	Fabricated Metal Products, Total	4,020	4,574	0.13%	554	1.30%
341	Metal Cans and Shipping Containers	***	***	***	***	***
342	Cutlery, Handtools, and Hardware	***	***	***	***	***
343	Plumbing and Heating, Except Electrical	***	***	***	***	***
344	Fabricated Structural Metal Products	2,876	3,521	0.10%	645	2.04%
346	Metal Forgings and Stampings	***	***	***	***	***
347	Metal Services, n.e.c.	212	276	0.01%	64	2.67%
348	Ordnance and Accessories, n.e.c.	350	276	0.01%	-74	-2.35%
349	Miscellaneous Fabricated Metal Products	346	211	0.01%	-135	-4.83%
350	Industrial Machinery and Equipment, Total	5,651	6,579	0.19%	928	1.53%
353	Construction and Related Machinery	***	***	***	***	***
354	Metalworking Machinery	429	592	0.01%	163	3.27%
355	Special Industry Machinery	532	960	0.02%	428	6.08%
356	General Industrial Machinery	422	820	0.01%	398	6.87%
357	Computer and Office Equipment	1,555	1,691	0.05%	136	0.84%
358	Refrigeration and Service Machinery	1,737	1,383	0.06%	-354	-2.25%
359	Industrial Machinery, n.e.c.	608	554	0.02%	-54	-0.93%
360	Electronic and Other Electrical Equipment, Total	11,053	12,001	0.37%	948	0.83%
361	Electric Distribution Equipment	***	***	***	***	***
362	Electrical Industrial Apparatus	***	***	***	***	***
363	Household Appliances	***	***	***	***	***

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
364	Electric Lighting and Wiring Equipment	385	577	0.01%	192	4.13%
365	Household Audio and Video Equipment	238	337	0.01%	99	3.54%
366	Communications Equipment	7,138	7,383	0.24%	245	0.34%
367	Electronic Components and Accessories	2,838	3,176	0.10%	338	1.13%
369	Miscellaneous Electrical Equipment and Supplies	233	240	0.01%	7	0.30%
370	Transportation Equipment, Total	5,688	7,166	0.19%	1,478	2.34%
371	Motor Vehicles and Equipment	1,155	1,001	0.04%	-154	-1.42%
372	Aircraft and Parts	998	1,229	0.03%	231	2.10%
373	Ship and Boat Building and Repairing	283	397	0.01%	114	3.44%
374	Railroad Equipment	***	***	***	***	***
375	Motorcycles, Bicycles, and Parts	24	38	0.00%	14	4.70%
376	Guided Missiles, Space Vehicles, Parts	***	***	***	***	***
379	Miscellaneous Transportation Equipment	76	90	0.00%	14	1.71%
380	Instruments and Related Products, Total	7,449	8,558	0.25%	1,109	1.40%
381	Search and Navigation Equipment	4,850	5,490	0.16%	640	1.25%
382	Measuring and Controlling Devices	1,707	1,963	0.06%	256	1.41%
384	Medical Instruments and Supplies	594	751	0.02%	157	2.37%
385	Ophthalmic Goods	***	***	***	***	***
386	Photographic Equipment and Supplies	253	290	0.01%	37	1.37%
390	Miscellaneous Manufacturing Industries, Total	1,277	1,816	0.04%	539	3.58%
391	Jewelry, Silverware, and Plated Ware	28	34	0.00%	6	1.96%
394	Toys and Sporting Goods	***	***	***	***	***
395	Pens, Pencils, Office and Art Supplies	***	***	***	***	***
396	Costume Jewelry and Notions	***	***	***	***	***
399	Miscellaneous Manufacturers	1,119	1,598	0.04%	479	3.63%
D1	Durable Goods Manufacturing, Total	47,580	55,592	1.60%	8,012	1.57%
200	Food and Kindred Products, Total	5,860	6,018	0.20%	158	0.27%
201	Meat Products	454	325	0.02%	-129	-3.29%
202	Dairy Products	457	297	0.02%	-160	-4.22%
203	Preserved Fruits and Vegetables	409	259	0.01%	-150	-4.47%
204	Grain Mill Products	***	***	***	***	***
205	Bakery Products	2,181	2,416	0.07%	235	1.03%
206	Sugar and Confectionery Products	***	***	***	***	***
208	Beverages	1,505	2,054	0.05%	549	3.16%
209	Miscellaneous Foods and Kindred Products	570	310	0.02%	-260	-5.91%
210	Tobacco Products, Total	180	237	0.01%	57	2.79%
212	Cigars	171	231	0.01%	60	3.05%
214	Tobacco Stemming and Redrying	9	6	0.00%	-3	-3.97%
220	Textile Mill Products, Total	562	723	0.02%	161	2.55%
221	Broadwoven Fabric Mills, Cotton	***	***	***	***	***
225	Knitting Mills	***	***	***	***	***
226	Textile Finishing, Except Wool	120	194	0.00%	74	4.92%
228	Yarn and Thread Mills	***	***	***	***	***
229	Miscellaneous Textile Goods	20	22	0.00%	2	0.96%
230	Apparel and Textile Products, Total	1,042	1,049	0.03%	7	0.07%
231	Men's and Boy's Suits And Coats	***	***	***	***	***
232	Men's and Boy's Furnishings	***	***	***	***	***
233	Women's and Misses' Outerwear	***	***	***	***	***

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
235	Hats, Caps, and Millinery	***	***	***	***	***
236	Girl's and Children's Outerwear	***	***	***	***	***
238	Miscellaneous Apparel and Accessories	***	***	***	***	***
239	Miscellaneous Fabricated Textile Products	439	571	0.01%	132	2.66%
260	Paper and Allied Products, Total	***	***	***	***	***
262	Paper Mills, Except Building Paper	***	***	***	***	***
263	Paperboard Mills	***	***	***	***	***
265	Paperboard Container and Boxes	***	***	***	***	***
267	Miscellaneous Converted Paper Products	***	***	***	***	***
270	Printing and Publishing, Total	37,837	41,684	1.27%	3,847	0.97%
271	Newspapers	11,306	11,000	0.38%	-306	-0.27%
272	Periodicals	8,181	10,387	0.27%	2,206	2.42%
273	Books	3,545	4,768	0.12%	1,223	3.01%
274	Miscellaneous Publishing	2,431	3,162	0.08%	731	2.66%
275	Commercial Printing	11,317	11,276	0.38%	-41	-0.04%
276	Manifold Business Forms	629	615	0.02%	-14	-0.22%
277	Greeting Card Publishing	19	37	0.00%	18	6.89%
278	Blankbooks and Bookbinding	***	***	***	***	***
279	Printing Trade Services	188	209	0.01%	21	1.06%
280	Chemicals and Allied Products, Total	3,702	3,810	0.12%	108	0.29%
281	Industrial Inorganic Chemicals	406	399	0.01%	-7	-0.17%
282	Plastics Materials and Synthetics	46	41	0.00%	-5	-1.14%
283	Drugs	1,406	1,719	0.05%	313	2.03%
284	Soap, Cleaners, and Toilet Goods	322	265	0.01%	-57	-1.93%
285	Paints and Allied Products	***	***	***	***	***
286	Industrial Organic Chemicals	***	***	***	***	***
287	Agricultural Chemicals	***	***	***	***	***
289	Miscellaneous Chemical Products	***	***	***	***	***
290	Petroleum and Coal Products, Total	405	454	0.01%	49	1.15%
291	Petroleum Refining	***	***	***	***	***
295	Asphalt Paving and Roofing Materials	332	390	0.01%	58	1.62%
299	Miscellaneous Petroleum And Coal Products	36	33	0.00%	-3	-0.87%
300	Rubber and Miscellaneous Plastics Products, Total	2,613	3,039	0.09%	426	1.52%
305	Hose and Belting, and Gaskets and Packing	***	***	***	***	***
308	Miscellaneous Plastics Products, n.e.c.	2,608	3,034	0.09%	426	1.52%
310	Leather and Leather Products, Total	***	***	***	***	***
314	Footwear, Except Rubber	***	***	***	***	***
316	Luggage	***	***	***	***	***
D2	Nondurable Goods Manufacturing, Total	53,531	58,309	1.80%	4,778	0.86%
E	Transportation and Public Utilities	157,856	184,073	5.30%	26,217	1.55%
400	Railroad Transportation, Total	***	***	***	***	***
401	Railroad Transportation	***	***	***	***	***
410	Local and Interurban Transit, Total	6,925	10,122	0.23%	3,197	3.87%
411	Local and Suburban Transportation	4,258	6,733	0.14%	2,475	4.69%
412	Taxis	728	837	0.02%	109	1.41%
413	Intercity and Rural Bus Transportation	***	***	***	***	***
414	Bus Charter Service	778	1,080	0.03%	302	3.33%
415	School Buses	497	626	0.02%	129	2.33%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
417	Bus Terminal and Service Facilities	***	***	***	***	***
420	Trucking and Warehousing, Total	18,945	18,763	0.64%	-182	-0.10%
421	Trucking and Courier Services, Except Air	17,148	16,324	0.58%	-824	-0.49%
422	Public Warehousing And Storage	1,618	2,237	0.05%	619	3.29%
423	Trucking Terminal Facilities	***	***	***	***	***
430	U.S. Postal Service, Total	23,007	21,623	0.77%	-1384	-0.62%
431	U.S. Postal Service	23,007	21,623	0.77%	-1384	-0.62%
440	Water Transportation, Total	721	998	0.02%	277	3.30%
441	Deep Sea Foreign Transportation Of Freight	***	***	***	***	***
442	Deep Sea Domestic Transportation of Freight	***	***	***	***	***
448	Water Transportation of Passengers	***	***	***	***	***
449	Water Transportation Services	311	360	0.01%	49	1.47%
450	Transportation by Air, Total	29,018	36,421	0.97%	7,403	2.30%
451	Air Transportation, Scheduled	26,138	32,857	0.88%	6,719	2.31%
452	Air Transportation, Nonscheduled	951	1,052	0.03%	101	1.01%
458	Airports, Flying Fields, and Services	1,929	2,512	0.06%	583	2.68%
470	Transportation Services, Total	7,598	8,320	0.26%	722	0.91%
472	Passenger Transportation Arrangement	5,261	5,277	0.18%	16	0.03%
473	Freight Transportation Arrangement	1,591	2,096	0.05%	505	2.80%
474	Rental of Railroad Cars	***	***	***	***	***
478	Miscellaneous Transportation Services	743	943	0.02%	200	2.41%
0	Transportation, Total	88,705	99,444	2.98%	10,739	1.15%
480	Communications, Total	55,765	69,576	1.87%	13,811	2.24%
481	Telephone Communications	39,571	49,030	1.33%	9,459	2.17%
482	Telegraph and Other Communications	433	494	0.01%	61	1.33%
483	Radio and Television Broadcasting	8,104	10,808	0.27%	2,704	2.92%
484	Cable and Other Pay TV Services	5,444	7,373	0.18%	1,929	3.08%
489	Communication Services, n.e.c.	2,213	1,871	0.07%	-342	-1.66%
490	Utilities and Sanitary Services, Total	13,386	15,053	0.45%	1,667	1.18%
491	Electric Services	6,591	7,324	0.22%	733	1.06%
492	Gas Production and Distribution	2,286	1,930	0.08%	-356	-1.68%
493	Combination Utility Services	1,464	1,422	0.05%	-42	-0.29%
494	Water Supply	88	115	0.00%	27	2.71%
495	Sanitary Services	2,952	4,255	0.10%	1,303	3.72%
496	Steam and Air Conditioning Supply	***	***	***	***	***
00	Communications and Utilities, Total	69,151	84,629	2.32%	15,478	2.04%
FG	Wholesale and Retail Trade, Total	495,364	570,986	16.63%	75,622	1.43%
500	Wholesale Trade, Durable Goods, Total	59,348	63,046	1.99%	3,698	0.61%
501	Motor Vehicles, Parts and Supplies	6,201	5,750	0.21%	-451	-0.75%
502	Furniture and Home Furnishings	2,587	3,069	0.09%	482	1.72%
503	Lumber and Construction Materials	5,611	5,639	0.19%	28	0.05%
504	Professional and Commercial Equipment	23,947	24,577	0.80%	630	0.26%
505	Metals and Minerals, Except Petroleum	265	302	0.01%	37	1.32%
506	Electrical Goods	9,214	11,261	0.31%	2,047	2.03%
507	Hardware, Plumbing, and Heating Equipment	3,620	3,848	0.12%	228	0.61%
508	Machinery, Equipment, and Supplies	5,498	5,350	0.18%	-148	-0.27%
509	Miscellaneous Durable Goods	2,405	3,250	0.08%	845	3.06%
510	Wholesale Trade, Nondurable Goods, Total	25,595	31,054	0.86%	5,459	1.95%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
511	Paper and Paper Products	2,975	3,404	0.10%	429	1.36%
512	Drugs, Proprietarys, and Sundries	1,596	2,028	0.05%	432	2.42%
513	Apparel, Piece Goods, and Notions	1,095	1,668	0.04%	573	4.30%
514	Groceries and Related Products	8,968	11,589	0.30%	2621	2.60%
515	Farm-Product Raw Materials	124	50	0.00%	-74	-8.68%
516	Chemicals and Allied Products	690	871	0.02%	181	2.36%
517	Petroleum and Petroleum Products	3,774	4,787	0.13%	1,013	2.41%
518	Beer, Wine, and Distilled Beverages	2,185	2,262	0.07%	77	0.35%
519	Miscellaneous Nondurable Goods	4,188	4,395	0.14%	207	0.48%
F	Wholesale Trade, Total	84,943	94,100	2.85%	9,157	1.03%
520	Building Materials and Garden Supplies, Total	15,280	18,082	0.51%	2,802	1.70%
521	Lumber and Other Building Materials	10,449	12,694	0.35%	2,245	1.97%
523	Paint, Glass, and Wallpaper Stores	767	630	0.03%	-137	-1.95%
525	Hardware Stores	1,410	1,466	0.05%	56	0.39%
526	Retail Nurseries and Garden Stores	2,539	3,169	0.09%	630	2.24%
527	Mobile Home Dealers	115	123	0.00%	8	0.67%
530	General Merchandise Stores, Total	44,783	48,812	1.50%	4,029	0.87%
531	Department Stores	38,025	41,614	1.28%	3,589	0.91%
533	Variety Stores	3,552	3,875	0.12%	323	0.87%
539	Miscellaneous General Merchandise Stores	3,206	3,323	0.11%	117	0.36%
540	Food Stores, Total	58,587	69,642	1.97%	11,055	1.74%
541	Grocery Stores	51,146	60,741	1.72%	9,595	1.73%
542	Meat and Fish Markets	917	989	0.03%	72	0.76%
543	Fruit and Vegetable Markets	187	157	0.01%	-30	-1.73%
544	Candy, Nut, and Confectionery Stores	287	176	0.01%	-111	-4.77%
545	Dairy Products Stores	235	219	0.01%	-16	-0.70%
546	Retail Bakeries	3,316	3370	0.11%	54	0.16%
549	Miscellaneous Food Stores	2,499	3,990	0.08%	1,491	4.79%
550	Auto Dealers and Service Stations, Total	39,753	43,977	1.33%	4,224	1.01%
551	New and Used Car Dealers	21,741	25,655	0.73%	3,914	1.67%
552	Used Car Dealers	1,695	2,428	0.06%	733	3.66%
553	Auto and Home Supply Stores	5,630	5,210	0.19%	-420	-0.77%
554	Gasoline Service Stations	9,209	8,987	0.31%	-222	-0.24%
555	Boat Dealers	529	443	0.02%	-86	-1.76%
556	Recreational Vehicle Dealers	192	209	0.01%	17	0.85%
557	Motorcycle Dealers	717	986	0.02%	269	3.24%
559	Automotive Dealers, n.e.c.	***	***	***	***	***
560	Apparel and Accessories Stores, Total	24,315	22,744	0.82%	-1,571	-0.67%
561	Men's and Boy's Clothing Stores	1,938	1,062	0.07%	-876	-5.84%
562	Women's Clothing Stores	5,447	4,723	0.18%	-724	-1.42%
563	Women's Accessory and Specialty Stores	1,407	1,872	0.05%	465	2.90%
564	Children's and Infant's Wear Stores	1,678	1,980	0.06%	302	1.67%
565	Family Clothing Stores	8,970	9,659	0.30%	689	0.74%
566	Shoe Stores	3,907	2,878	0.13%	-1,029	-3.01%
569	Miscellaneous Apparel and Accessory Stores	968	570	0.03%	-398	-5.16%
570	Furniture and Homefurnishings Stores, Total	23,074	28,538	0.77%	5,464	2.15%
571	Furniture and Homefurnishings Stores	11,646	14,396	0.39%	2,750	2.14%
572	Household Appliance Stores	647	541	0.02%	-106	-1.77%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
573	Radio, Television, and Computer Stores	10,781	13,601	0.36%	2,820	2.35%
580	Eating and Drinking Places, Total	148,695	181,434	4.99%	32,739	2.01%
581	Eating and Drinking Places	148,695	181,434	4.99%	32,739	2.01%
590	Miscellaneous Retail Stores, Total	55,934	63,657	1.88%	7,723	1.30%
591	Drug Stores and Proprietary Stores	10,413	11,130	0.35%	717	0.67%
592	Liquor Stores	2,625	2,051	0.09%	-574	-2.44%
593	Used Merchandise Stores	2,503	2,391	0.08%	-112	-0.46%
594	Miscellaneous Shopping Goods Stores	25,177	31,384	0.85%	6,207	2.23%
596	Nonstore Retailers	3,107	3,677	0.10%	570	1.70%
598	Fuel Dealers	1,041	991	0.03%	-50	-0.49%
599	Retail Stores, n.e.c.	11,068	12,033	0.37%	965	0.84%
G	Retail Trade, Total	410,421	476,886	13.77%	66,465	1.51%
600	Depository Institutions, Total	31,226	30,112	1.05%	-1,114	-0.36%
601	Central Reserve Depositories	***	***	***	***	***
602	Commercial Banks	17,924	18,668	0.60%	744	0.41%
603	Saving Institutions	4,640	516	0.16%	-4,124	-19.72%
606	Credit Unions	7,733	9,976	0.26%	2,243	2.58%
608	Foreign Bank Branches and Agencies	145	119	0.00%	-26	-1.96%
609	Functions Closely Related To Banking	734	780	0.02%	46	0.61%
610	Nondepository Institutions, Total	21,854	25,938	0.73%	4,084	1.73%
611	Federal and Fed-sponsored Credit	7,394	8,408	0.25%	1,014	1.29%
614	Personal Credit Institutions	3,371	4,925	0.11%	1,554	3.86%
615	Business Credit Institutions	1,782	1,479	0.06%	-303	-1.85%
616	Mortgage Bankers and Brokers	9,307	11,126	0.31%	1,819	1.80%
620	Security and Commodity Brokers, Total	9,379	11,465	0.31%	2,086	2.03%
621	Security Brokers and Dealers	5,386	6,464	0.18%	1,078	1.84%
622	Commodity Contracts Brokers, Dealers	461	461	0.02%	0	0.00%
623	Security and Commodity Exchanges	***	***	***	***	***
628	Security and Commodity Services	3,256	4,169	0.11%	913	2.50%
630	Insurance Carriers, Total	27,304	31,405	0.92%	4,101	1.41%
631	Life Insurance	1,895	1,720	0.06%	-175	-0.96%
632	Medical Service and Health Insurance	8,718	11,060	0.29%	2,342	2.41%
633	Fire, Marine, and Casualty Insurance	12,387	13,651	0.42%	1,264	0.98%
635	Surety Insurance	427	482	0.01%	55	1.22%
636	Title Insurance	1,403	1,652	0.05%	249	1.65%
637	Pension, Health, and Welfare Funds	2,456	2,819	0.08%	363	1.39%
639	Insurance Carriers, N.e.c.	***	***	***	***	***
640	Insurance Agents, Brokers, and Services, Total	9,042	10,462	0.30%	1,420	1.47%
641	Insurance Agents, Brokers, and Services	9,042	10,462	0.30%	1,420	1.47%
650	Real Estate, Total	45,061	50,058	1.51%	4,997	1.06%
651	Real Estate Operators and Lessors	14,691	14,816	0.49%	125	0.08%
653	Real Estate Agents and Managers	25,248	28,988	0.85%	3,740	1.39%
654	Title Abstract Offices	1,346	1,667	0.05%	321	2.16%
655	Subdividers and Developers	3,776	4,587	0.13%	811	1.96%
670	Holding and Other Investment Offices, Total	5,365	6,450	0.18%	1,085	1.86%
671	Holding Offices	1,931	2,510	0.06%	579	2.66%
672	Investment Offices	192	123	0.01%	-69	-4.36%
673	Trusts	2,747	3,368	0.09%	621	2.06%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
679	Miscellaneous Investing	495	449	0.02%	-46	-0.97%
H	Finance, Insurance, and Real Estate, Total	149,231	165,890	5.01%	16,659	1.06%
700	Hotels and Other Lodging Places, Total	43,419	52,598	1.46%	9,179	1.94%
701	Hotels and Motels	42,627	51,585	1.43%	8,958	1.93%
702	Rooming and Boarding Houses	248	223	0.01%	-25	-1.06%
703	Camps and Recreational Vehicle Parks	410	625	0.01%	215	4.31%
704	Membership-Basis Organization Hotels	134	165	0.00%	31	2.10%
720	Personal Services, Total	26,631	29,290	0.89%	2,659	0.96%
721	Laundry, Cleaning, and Garment Services	8,322	8,761	0.28%	439	0.52%
722	Photographic Studios, Portrait	794	670	0.03%	-124	-1.68%
723	Beauty Shops	12,774	14,676	0.43%	1,902	1.40%
724	Barber Shops	289	358	0.01%	69	2.16%
725	Shoe Repair and Shoe Shine Parlors	123	108	0.00%	-15	-1.29%
726	Funeral Service and Crematories	980	934	0.03%	-46	-0.48%
729	Miscellaneous Personal Services	3,349	3,783	0.11%	434	1.23%
730	Business Services, Total	346,835	446,690	11.64%	99,855	2.56%
731	Advertising	4,465	5,081	0.15%	616	1.30%
732	Credit Reporting and Collection	2,462	3,253	0.08%	791	2.83%
733	Mailing, Reproduction., and Stenographic Services	12,130	12,967	0.41%	837	0.67%
734	Services to Buildings	41,011	43,219	1.38%	2,208	0.53%
735	Miscellaneous Equipment Rental and Leasing	5,753	6,796	0.19%	1,043	1.68%
736	Personnel Supply Services	61,008	72,654	2.05%	11,646	1.76%
737	Computer and Data Processing Services	176,133	256,528	5.91%	80,395	3.83%
738	Miscellaneous Business Services	43,873	46,192	1.47%	2,319	0.52%
750	Auto Repair Services and Parking, Total	22,624	28,145	0.76%	5,521	2.21%
751	Automotive Rentals, No Drivers	3,967	4,843	0.13%	876	2.02%
752	Automobile Parking	3,500	4,076	0.12%	576	1.54%
753	Automobile Repair Shops	11,365	14,875	0.38%	3,510	2.73%
754	Automobile Services, Except Repair	3,792	4,351	0.13%	559	1.38%
760	Miscellaneous Repair Services , Total	4,815	5,258	0.16%	443	0.88%
762	Electrical Repair Shops	1,892	2,264	0.06%	372	1.81%
763	Watch, Clock, and Jewelry Repair	96	137	0.00%	41	3.62%
764	Reupholstery and Furniture Repair	504	471	0.02%	-33	-0.67%
769	Miscellaneous Repair Shops	2,323	2,386	0.08%	63	0.27%
780	Motion Pictures	7,571	8,678	0.25%	1,107	1.37%
781	Motion Picture Production and Services	2,765	3,564	0.09%	799	2.57%
782	Motion Picture Distribution and Services	***	***	***	***	***
783	Motion Picture Theaters	1,757	1,841	0.06%	84	0.47%
784	Video Tape Rental	2,813	2,931	0.09%	118	0.41%
790	Amusement and Recreation Services, Total	29,011	41,008	0.97%	11,997	3.52%
791	Dance Studios, Schools, and Halls	650	713	0.02%	63	0.93%
792	Producers, Orchestras, Entertainers	2,725	2,239	0.09%	-486	-1.95%
793	Bowling Centers	977	1,098	0.03%	121	1.17%
794	Commercial Sports	3,968	6,141	0.13%	2,173	4.46%
799	Miscellaneous Amusement and Recreation	20,691	30,817	0.69%	10,126	4.06%
800	Health Services	166,484	201,508	5.59%	35,024	1.93%
801	Offices and Clinics, Medical Doctors	37,038	53,599	1.24%	16,561	3.77%
802	Offices and Clinics, Dentists	12,730	16,034	0.43%	3,304	2.33%

Appendix (cont.)

Appendix Table 2 – PMSA Industry Detail (cont.)

SIC	Industry Title	2000	2010	Percent of 2000	Change	Growth Rate
803	Offices, Osteopathic Physicians	99	110	0.00%	11	1.06%
804	Offices, Other Health Practitioners	6,432	7,290	0.22%	858	1.26%
805	Nursing and Personal Care Facilities	23,276	30,589	0.78%	7,313	2.77%
806	Hospitals	69,584	71,974	2.34%	2,390	0.34%
807	Medical and Dental Laboratories	4,341	5,177	0.15%	836	1.78%
808	Home Health Care Services	7,049	10,201	0.24%	3,152	3.77%
809	Health and Allied Services, n.e.c.	5,935	6,534	0.20%	599	0.97%
810	Legal Services, Total	47,052	63,662	1.58%	16,610	3.07%
811	Legal Services	47,052	63,662	1.58%	16,610	3.07%
820	Educational Services, Total	200,091	233,878	6.72%	33,787	1.57%
821	Elementary and Secondary Schools	128,380	153,333	4.31%	24,953	1.79%
822	Colleges and Universities	60,060	67,203	2.02%	7,143	1.13%
823	Libraries	451	468	0.02%	17	0.37%
824	Vocational Schools	3,422	4,305	0.11%	883	2.32%
829	Schools and Educational Services, n.e.c.	7,778	8,569	0.26%	791	0.97%
830	Social Services, Total	61,346	93,823	2.06%	32,477	4.34%
832	Individual and Family Services	11,045	15,525	0.37%	4,480	3.46%
833	Job Training and Related Services	7,735	11,941	0.26%	4,206	4.44%
835	Child Day Care Services	17,399	29,094	0.58%	11,695	5.28%
836	Residential Care	13,889	19,011	0.47%	5,122	3.19%
839	Social Services, n.e.c.	11,278	18,252	0.38%	6,974	4.93%
840	Museums, Botanical, Zoological Garden, Total	1,429	1,588	0.05%	159	1.06%
841	Museums and Art Galleries	1,389	1,537	0.05%	148	1.02%
842	Botanical and Zoological Gardens	***	***	***	***	***
860	Membership Organizations, Total	93,374	99,492	3.13%	6,118	0.64%
861	Business Associations	29,172	30,822	0.98%	1,650	0.55%
862	Professional Organizations	28,124	31,539	0.94%	3,415	1.15%
863	Labor Organizations	9,306	9,488	0.31%	182	0.19%
864	Civic and Social Associations	14,404	14,662	0.48%	258	0.18%
865	Political Organizations	2,147	2,169	0.07%	22	0.10%
866	Religious Organizations	5,009	5,439	0.17%	430	0.83%
869	Membership Organizations, n.e.c.	5,212	5,373	0.17%	161	0.30%
870	Engineering and Management Services, Total	183,683	218,409	6.16%	34,726	1.75%
871	Engineering and Architectural Services	46,370	58,695	1.56%	12,325	2.39%
872	Accounting, Auditing, and Bookkeeping	19,694	25,129	0.66%	5,435	2.47%
873	Research And Testing Services	43,607	44,172	1.46%	565	0.13%
874	Management and Public Relations	74,012	90,413	2.48%	16,401	2.02%
882	Self-Employed and Unpaid Family Workers	234,424	253,057	7.87%	18,633	0.77%
890	Services, n.e.c. - Total	2,039	1,493	0.07%	-546	-3.07%
899	Services, n.e.c.	2,039	1,493	0.07%	-546	-3.07%
I	Services, Total	1,236,404	1,525,520	41.50%	289,116	2.12%
901	Federal Government, Except Postal	310,152	326,150	10.41%	5,998	0.50%
902	State Government, Except Education and Hospitals	58,599	52,388	1.97%	-6,211	-1.11%
903	Local Government, Except Education and Hospitals	61,717	79,032	2.07%	17,315	2.50%
910	Federal Government	310,152	326,150	10.41%	15,998	0.50%
920	State Government, Except Education and Hospitals	58,599	52,388	1.97%	-6,211	-1.11%
930	Local Government, Except Education and Hospitals	61,717	79,032	2.07%	17,315	2.50%
J	Government, Total	430,468	447,570	14.45%	17,102	0.39%

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
00-0000	Total, All Occupations	680,042	749,292	69,250	0.97%	22,417
11-0000	Management Occupations	77,963	85,507	7,544	0.93%	2,281
11-1011	Chief Executives	8,077	9,053	976	1.15%	351
11-1021	General and Operations Managers	16,704	18,179	1,475	0.85%	432
11-1031	Legislators	52	56	4	.74%	2
11-2011	Advertising and Promotions Managers	1,143	1,360	217	1.75%	38
11-2021	Marketing Managers	1,874	2,222	348	1.72%	62
11-2022	Sales Managers	1,131	1,421	290	2.31%	45
11-2031	Public Relations Managers	2,506	3,116	610	2.20%	100
11-3011	Administrative Services Managers	4,728	5,390	662	1.32%	143
11-3021	Computer and Information Systems Managers	3,078	4,235	1,157	3.24%	170
11-3031	Financial Managers	5,530	6,183	653	1.12%	152
11-3040	Human Resources Managers	2,835	2,970	135	0.47%	63
11-3051	Industrial Production Managers	87	88	1	0.11%	2
11-3061	Purchasing Managers	861	763	-98	-1.20%	27
11-3071	Transportation, Storage, and Distribution Managers	736	788	52	0.69%	18
11-9011	Farm, Ranch, and Other Agricultural Managers	40	52	12	2.66%	2
11-9021	Construction Managers	548	637	89	1.52%	19
11-9031	Education Administrators, Preschool and Child Care Center/Program	238	281	43	1.67%	11
11-9032	Education Administrators, Elementary and Secondary School	365	359	-6	-0.17%	10
11-9033	Education Administrators, Postsecondary	750	736	-14	-0.19%	20
11-9041	Engineering Managers	1,588	1,600	12	0.08%	28
11-9051	Food Service Managers	1,522	1,565	43	0.28%	25
11-9061	Funeral Directors	63	39	-24	-4.68%	1
11-9081	Lodging Managers	222	269	47	1.94%	8
11-9111	Medical and Health Services Managers	1,341	1,528	187	1.31%	42
11-9121	Natural Sciences Managers	1,011	1,004	-7	-0.07%	18
11-9131	Postmasters and Mail Superintendents	4	5	1	2.26%	0
11-9141	Property, Real Estate, and Community Association Managers	1,556	2,008	452	2.58%	75
11-9151	Social and Community Service Managers	1,303	1,502	199	1.43%	47
11-9199	Managers, All Other	18,070	18,098	28	0.02%	370
13-0000	Business and Financial Operations Occupations	69,871	79,171	9,300	1.26%	2,176
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	41	40	-1	-0.25%	1
13-1021	Purchasing Agents and Buyers, Farm Products	97	133	36	3.21%	6
13-1022	Wholesale and Retail Buyers, Except Farm Products	139	112	-27	-2.14%	4
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	3,011	3,268	257	0.82%	86
13-1031	Claims Adjusters, Examiners, and Investigators	119	131	12	0.97%	3
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	2,141	2,297	156	0.71%	70
13-1051	Cost Estimators	145	166	21	1.36%	5
13-1061	Emergency Management Specialists	147	182	35	2.16%	8
13-1071	Employment, Recruitment, and Placement Specialists	2,259	2,423	164	0.70%	61

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
13-1072	Compensation, Benefits, and Job Analysis Specialists	774	852	78	0.96%	23
13-1073	Training and Development Specialists	1,862	2,057	195	1.00%	56
13-1111	Management Analysts	23,084	28,619	5,535	2.17%	779
13-1121	Meeting and Convention Planners	971	1,140	169	1.62%	35
13-1199	Business Operations Specialists, All Other	14,732	16,210	1,478	0.96%	522
13-2011	Accountants and Auditors	11,324	10,849	-475	-0.43%	175
13-2021	Appraisers and Assessors of Real Estate	126	142	16	1.20%	5
13-2031	Budget Analysts	2,394	2,884	490	1.88%	98
13-2041	Credit Analysts	74	79	5	0.66%	2
13-2051	Financial Analysts	1,174	1,364	190	1.51%	35
13-2052	Personal Financial Advisors	549	760	211	3.31%	28
13-2053	Insurance Underwriters	168	216	48	2.54%	7
13-2061	Financial Examiners	414	442	28	0.66%	11
13-2071	Loan Counselors	227	235	8	0.35%	6
13-2072	Loan Officers	665	689	24	0.36%	16
13-2081	Tax Examiners, Collectors, and Revenue Agents	525	609	84	1.50%	22
13-2082	Tax Preparers	82	67	-15	-2.00%	2
13-2099	Financial Specialists, All Other	2,627	3,205	578	2.01%	110
15-0000	Computer and Mathematical Occupations	25,175	35,680	10,505	3.55%	1,328
15-1011	Computer and Information Scientists, Research	721	946	225	2.75%	29
15-1021	Computer Programmers	2,253	2,381	128	0.55%	61
15-1031	Computer Software Engineers, Applications	733	1,329	596	6.13%	65
15-1032	Computer Software Engineers, Systems Software	1,597	3,191	1,594	7.17%	170
15-1041	Computer Support Specialists	2,651	4,629	1,978	5.73%	209
15-1051	Computer Systems Analysts	9,245	12,377	3,132	2.96%	397
15-1061	Database Administrators	1,161	1,716	555	3.98%	61
15-1071	Network and Computer Systems Administrators	1,508	2,416	908	4.83%	97
15-1081	Network Systems and Data Communications Analysts	836	1,390	554	5.22%	59
15-1099	Computer Specialists, All Other	1,908	2,905	997	4.29%	117
15-2011	Actuaries	282	324	42	1.40%	8
15-2021	Mathematicians	53	48	-5	-0.99%	1
15-2031	Operations Research Analysts	1,180	1,052	-128	-1.14%	38
15-2041	Statisticians	991	898	-93	-0.98%	13
15-2099	Mathematical Science Occupations, All Other	56	78	22	3.37%	3
17-0000	Architecture and Engineering Occupations	13,472	14,785	1,313	0.93%	389
17-1011	Architects, Except Landscape and Naval	1,888	2,195	307	1.52%	43
17-1012	Landscape Architects	114	111	-3	-0.27%	1
17-1021	Cartographers and Photogrammetrists	46	51	5	1.04%	2
17-1022	Surveyors	59	64	5	0.82%	2
17-1099	Architects, Surveyors, and Cartographers, All Other (OES Only)	188	248	60	2.81%	7
17-2011	Aerospace Engineers	266	280	14	0.51%	9
17-2021	Agricultural Engineers	5	5	0	0.00%	0
17-2031	Biomedical Engineers	13	14	1	0.74%	0
17-2041	Chemical Engineers	95	98	3	0.31%	2
17-2051	Civil Engineers	939	941	2	0.02%	15

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
17-2061	Computer Hardware Engineers	209	217	8	0.38%	4
17-2071	Electrical Engineers	572	661	89	1.46%	20
17-2072	Electronics Engineers, Except Computer	1,154	1,128	-26	-0.23%	21
17-2081	Environmental Engineers	554	660	106	1.77%	22
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	317	364	47	1.39%	10
17-2112	Industrial Engineers	157	152	-5	-0.32%	3
17-2121	Marine Engineers and Naval Architects	32	29	-3	-0.98%	1
17-2131	Materials Engineers	49	46	-3	-0.63%	1
17-2141	Mechanical Engineers	649	692	43	0.64%	24
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	7	7	0	0.00%	0
17-2161	Nuclear Engineers	59	55	-4	-0.70%	1
17-2171	Petroleum Engineers	28	29	1	0.35%	1
17-2199	Engineers, All Other	3,255	3,483	228	0.68%	89
17-3011	Architectural and Civil Drafters	103	117	14	1.28%	5
17-3012	Electrical and Electronics Drafters	247	347	100	3.46%	18
17-3013	Mechanical Drafters	42	51	9	1.96%	2
17-3021	Aerospace Engineering and Operations Technicians	***	***	***	***	***
17-3022	Civil Engineering Technicians	98	88	-10	-1.07%	2
17-3023	Electrical and Electronic Engineering Technicians	611	658	47	0.74%	17
17-3024	Electro-Mechanical Technicians	49	41	-8	-1.77%	1
17-3025	Environmental Engineering Technicians	14	18	4	2.54%	1
17-3026	Industrial Engineering Technicians	28	34	6	1.96%	1
17-3027	Mechanical Engineering Technicians	138	169	31	2.05%	6
17-3031	Surveying and Mapping Technicians	54	54	0	0.00%	2
17-3099	Drafters, Engineering, and Mapping Technicians, All Other (OES Only)	1,429	1,674	245	1.59%	56
19-0000	Life, Physical, and Social Sciences Occupations	24,471	27,046	2,575	1.01%	946
19-1010	Agricultural and Food Scientists	1,252	1,337	85	0.66%	53
19-1021	Biochemists and Biophysicists	12	13	1	0.80%	1
19-1022	Microbiologists	288	322	34	1.12%	14
19-1023	Zoologists and Wildlife Biologists	199	210	11	0.54%	8
19-1031	Conservation Scientists	83	89	6	0.70%	3
19-1032	Foresters	50	54	4	0.77%	2
19-1041	Epidemiologists	54	52	-2	-0.38%	1
19-1042	Medical Scientists, Except Epidemiologists	2,153	2,251	98	0.45%	60
19-1099	Life Scientists, All Other	139	172	33	2.15%	8
19-2011	Astronomers	100	108	8	0.77%	4
19-2012	Physicists	548	590	42	0.74%	22
19-2021	Atmospheric and Space Scientists	80	120	40	4.14%	7
19-2031	Chemists	562	600	38	0.66%	22
19-2032	Materials Scientists	39	47	8	1.88%	2
19-2041	Environmental Scientists and Specialists, Including Health	1,383	1,509	126	0.88%	58
19-2042	Geoscientists, Except Hydrologists and Geographers	116	125	9	0.75%	5
19-2043	Hydrologists	19	21	2	1.01%	1

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
19-2099	Physical Scientists, All Other	1,764	2,418	654	3.20%	141
19-3011	Economists	4,859	5,288	429	0.85%	164
19-3021	Market Research Analysts	1,526	1,653	127	0.80%	48
19-3022	Survey Researchers	208	237	29	1.31%	8
19-3031	Clinical, Counseling, and School Psychologists	822	895	73	0.85%	29
19-3032	Industrial-Organizational Psychologists	122	139	17	1.31%	5
19-3041	Sociologists	143	166	23	1.50%	6
19-3051	Urban and Regional Planners	228	271	43	1.74%	10
19-3091	Anthropologists and Archeologists	76	81	5	0.64%	2
19-3092	Geographers	10	10	0	0.00%	0
19-3093	Historians	228	240	12	0.51%	7
19-3094	Political Scientists	3,508	3,815	307	0.84%	118
19-3099	Social Scientists and Related Workers, All Other	2,815	3,032	217	0.75%	91
19-4011	Agricultural and Food Science Technicians	***	***	***	***	***
19-4021	Biological Technicians	222	257	35	1.47%	9
19-4031	Chemical Technicians	***	***	***	***	***
19-4041	Geological and Petroleum Technicians	***	***	***	***	***
19-4091	Environmental Science and Protection Technicians, Including	192	220	28	1.37%	10
19-4092	Forensic Science Technicians	22	24	2	0.87%	1
19-4093	Forest and Conservation Technicians	***	***	***	***	***
19-4099	Life, Physical, and Social Science Technicians, All Other	556	573	17	0.30%	22
21-0000	Community and Social Service Occupations	8,206	9,894	1,688	1.89%	295
21-1011	Substance Abuse and Behavioral Disorder Counselors	124	153	29	2.12%	5
21-1012	Educational, Vocational, and School Counselors	1,087	1,244	157	1.36%	38
21-1013	Marriage and Family Therapists	***	***	***	***	***
21-1014	Mental Health Counselors	761	864	103	1.28%	26
21-1015	Rehabilitation Counselors	342	391	49	1.35%	12
21-1021	Child, Family, and School Social Workers	581	694	113	1.79%	18
21-1022	Medical and Public Health Social Workers	358	399	41	1.09%	8
21-1023	Mental Health and Substance Abuse Social Workers	363	426	63	1.61%	10
21-1091	Health Educators	244	254	10	0.40%	5
21-1093	Social and Human Service Assistants	2,185	2,828	643	2.61%	97
21-2011	Clergy	299	368	69	2.10%	15
21-2021	Directors, Religious Activities and Education	***	***	***	***	***
21-9099	Counselors, Social, and Religious Workers, All Other (OES Only)	1,469	890	-579	-4.89%	43
23-0000	Legal Occupations	36,673	43,459	6,786	1.71%	961
23-1011	Lawyers	28,478	33,448	4,970	1.62%	710
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	245	282	37	1.42%	11
23-1022	Arbitrators, Mediators, and Conciliators	166	206	40	2.18%	9
23-1023	Judges, Magistrate Judges, and Magistrates	9	8	-1	-1.17%	0
23-2011	Paralegals and Legal Assistants	4,762	5,973	1,211	2.29%	150
23-2091	Court Reporters	71	97	26	3.17%	3
23-2092	Law Clerks	897	994	97	1.03%	18

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
23-2093	Title Examiners, Abstractors, and Searchers	185	209	24	1.23%	4
23-9099	Legal and Related Workers, All Other (OES Only)	1,860	2,242	382	1.89%	56
25-0000	Education, Training and Library Occupations	28,177	30,577	2,400	0.82%	909
25-1011	Business Teachers, Postsecondary	465	507	42	0.87%	17
25-1021	Computer Science Teachers, Postsecondary	141	155	14	0.95%	5
25-1022	Mathematical Science Teachers, Postsecondary	313	342	29	0.89%	11
25-1031	Architecture Teachers, Postsecondary	57	63	6	1.01%	2
25-1032	Engineering Teachers, Postsecondary	273	299	26	0.91%	10
25-1041	Agricultural Sciences Teachers, Postsecondary	14	15	1	0.69%	1
25-1042	Biological Science Teachers, Postsecondary	147	161	14	0.91%	5
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	30	32	2	0.65%	1
25-1052	Chemistry Teachers, Postsecondary	135	148	13	0.92%	5
25-1053	Environmental Science Teachers, Postsecondary	24	26	2	0.80%	1
25-1054	Physics Teachers, Postsecondary	106	116	10	0.91%	4
25-1061	Anthropology and Archeology Teachers, Postsecondary	71	78	7	0.94%	3
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	10	11	1	0.96%	0
25-1063	Economics Teachers, Postsecondary	153	168	15	0.94%	6
25-1064	Geography Teachers, Postsecondary	24	26	2	0.80%	1
25-1065	Political Science Teachers, Postsecondary	436	475	39	0.86%	16
25-1066	Psychology Teachers, Postsecondary	284	310	26	0.88%	10
25-1067	Sociology Teachers, Postsecondary	127	139	12	0.91%	5
25-1071	Health Specialties Teachers, Postsecondary	232	257	25	1.03%	9
25-1072	Nursing Instructors and Teachers, Postsecondary	205	242	37	1.67%	9
25-1081	Education Teachers, Postsecondary	481	530	49	0.97%	18
25-1082	Library Science Teachers, Postsecondary	28	30	2	0.69%	1
25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	53	58	5	0.91%	2
25-1112	Law Teachers, Postsecondary	277	303	26	0.90%	10
25-1113	Social Work Teachers, Postsecondary	134	146	12	0.86%	5
25-1121	Art, Drama, and Music Teachers, Postsecondary	847	924	77	0.87%	31
25-1122	Communications Teachers, Postsecondary	251	273	22	0.84%	9
25-1123	English Language and Literature Teachers, Postsecondary	467	509	42	0.86%	17
25-1124	Foreign Language and Literature Teachers, Postsecondary	233	254	21	0.87%	8
25-1125	History Teachers, Postsecondary	175	191	16	0.88%	6
25-1126	Philosophy and Religion Teachers, Postsecondary	502	547	45	0.86%	18
25-1191	Graduate Teaching Assistants	524	565	41	0.76%	18
25-1192	Home Economics Teachers, Postsecondary	66	72	6	0.87%	2
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	126	137	11	0.84%	5
25-1194	Vocational Education Teachers, Postsecondary	625	692	67	1.02%	24
25-1199	Postsecondary Teachers, All Other	1,591	1,737	146	0.88%	113
25-2011	Preschool Teachers, Except Special Education	1,096	1,171	75	0.66%	21
25-2012	Kindergarten Teachers, Except Special Education	56	56	0	0.00%	1

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
25-2021	Elementary School Teachers, Except Special Education	***	***	***	***	***
25-2022	Middle School Teachers, Except Special and Vocational Education	***	***	***	***	***
25-2023	Vocational Education Teachers, Middle School	***	***	***	***	***
25-2031	Secondary School Teachers, Except Special and Vocational Education	2,129	2,240	111	.51%	76
25-2032	Vocational Education Teachers, Secondary School	***	***	***	***	***
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	123	148	25	1.87%	4
25-2042	Special Education Teachers, Middle School	***	***	***	***	***
25-2043	Special Education Teachers, Secondary School	***	***	***	***	***
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	169	190	21	1.18%	4
25-3021	Self-Enrichment Education Teachers	507	578	71	1.32%	13
25-3999	Teachers, Primary, Secondary, and Adult, All Other (OES Only)	1,836	2,034	198	1.03%	39
25-4010	Archivists, Curators, and Museum Technicians	1,047	1,138	91	0.84%	31
25-4021	Librarians	1,629	1,775	146	0.86%	48
25-4031	Library Technicians	786	889	103	1.24%	45
25-9011	Audio-Visual Collections Specialists	81	82	1	0.12%	1
25-9021	Farm and Home Management Advisors	31	30	-1	-0.33%	0
25-9031	Instructional Coordinators	200	233	33	1.54%	6
25-9041	Teacher Assistants	3,604	4,124	520	1.36%	127
25-9099	Education, Training, and Library Workers, All Other	1	1	0	0.00%	0
25-9199	Library, Museum, Training, and Other Education Workers, All Other (OES Only)	1,006	1,067	61	0.59%	21
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	24,028	27,480	3,452	1.35%	936
27-1011	Art Directors	290	268	-22	-0.79%	7
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	118	123	5	0.42%	4
27-1014	Multi-Media Artists and Animators	109	141	32	2.61%	6
27-1021	Commercial and Industrial Designers	109	145	36	2.89%	5
27-1022	Fashion Designers	37	46	9	2.20%	1
27-1023	Floral Designers	260	234	-26	-1.05%	3
27-1024	Graphic Designers	1,260	1,594	334	2.38%	48
27-1025	Interior Designers	124	153	29	2.12%	4
27-1026	Merchandise Displayers and Window Trimmers	68	67	-1	-0.15%	1
27-1027	Set and Exhibit Designers	328	377	49	1.40%	9
27-1099	Art and Design Workers, All Other (OES Only)	1,181	1,222	41	0.34%	29
27-2011	Actors	648	527	-121	-2.05%	14
27-2012	Producers and Directors	1,999	2,382	383	1.77%	80
27-2021	Athletes and Sports Competitors	271	350	79	2.59%	14
27-2022	Coaches and Scouts	450	453	3	0.07%	10
27-2032	Choreographers	11	17	6	4.45%	1

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
27-2041	Music Directors and Composers	32	34	2	0.61%	1
27-2042	Musicians and Singers	100	109	9	0.87%	3
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	236	236	0	0.00%	5
27-3010	Announcers	344	358	14	0.40%	7
27-3020	News Analysts, Reporters and Correspondents	1,406	1,476	70	0.49%	55
27-3031	Public Relations Specialists	3,285	4,091	806	2.22%	138
27-3041	Editors	2,902	3,465	563	1.79%	156
27-3042	Technical Writers	347	381	34	0.94%	15
27-3043	Writers and Authors	2,478	2,896	418	1.57%	95
27-3091	Interpreters and Translators	219	227	8	0.36%	5
27-3099	Media and Communication Workers, All Other	2,412	2,701	289	1.14%	78
27-4011	Audio and Video Equipment Technicians	211	236	25	1.13%	9
27-4012	Broadcast Technicians	1,097	1,253	156	1.34%	49
27-4014	Sound Engineering Technicians	77	78	-1	.13%	2
27-4021	Photographers	168	197	29	1.61%	7
27-4031	Camera Operators, Television, Video, and Motion Picture	253	299	46	1.68%	10
27-4032	Film and Video Editors	75	95	20	2.39%	4
27-4099	Media and Communication Equipment Workers, All Other	1,123	1,249	126	1.07%	61
29-0000	HealthCare Practitioners and Technical Occupations	26,204	27,700	1,496	0.56%	746
29-1011	Chiropractors	3	3	0	0.00%	0
29-1020	Dentists	477	414	-63	-1.41%	13
29-1031	Dietitians and Nutritionists	326	342	16	0.48%	11
29-1041	Optometrists	73	57	-16	-2.44%	2
29-1051	Pharmacists	839	885	46	0.54%	30
29-1061	Anesthesiologists	86	84	-2	-0.24%	1
29-1062	Family and General Practitioners	1,170	1,195	25	0.21%	21
29-1063	Internists, General	534	509	-25	-0.48%	8
29-1064	Obstetricians and Gynecologists	33	32	-1	-0.31%	1
29-1065	Pediatricians, General	27	28	1	0.36%	1
29-1066	Psychiatrists	92	97	5	0.53%	2
29-1067	Surgeons	29	29	0	0.00%	0
29-1069	Physicians and Surgeons, All Other	256	252	-4	-0.16%	4
29-1071	Physician Assistants	289	374	85	2.61%	15
29-1081	Podiatrists	27	25	-2	-0.77%	1
29-1111	Registered Nurses	9,741	10,573	832	0.82%	281
29-1121	Audiologists	311	376	65	1.92%	15
29-1122	Occupational Therapists	335	373	38	1.08%	12
29-1123	Physical Therapists	483	530	47	0.93%	17
29-1124	Radiation Therapists	230	223	-7	-0.31%	5
29-1125	Recreational Therapists	249	258	9	0.36%	7
29-1126	Respiratory Therapists	363	422	59	1.52%	15
29-1127	Speech-Language Pathologists	351	410	59	1.57%	15
29-1131	Veterinarians	98	111	13	1.25%	3

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
29-1199	Health Diagnosing and Treating Practitioners, All Other	297	334	37	1.18%	10
29-2011	Medical and Clinical Laboratory Technologists	1,096	1,046	-50	-0.47%	26
29-2012	Medical and Clinical Laboratory Technicians	821	806	-15	-0.18%	19
29-2021	Dental Hygienists	324	369	45	1.31%	9
29-2031	Cardiovascular Technologists and Technicians	148	174	26	1.63%	6
29-2032	Diagnostic Medical Sonographers	141	149	8	0.55%	4
29-2033	Nuclear Medicine Technologists	345	354	9	0.26%	9
29-2034	Radiologic Technologists and Technicians	671	671	0	0.00%	15
29-2041	Emergency Medical Technicians and Paramedics	827	921	94	1.08%	30
29-2051	Dietetic Technicians	135	149	14	.99%	5
29-2052	Pharmacy Technicians	613	679	66	1.03%	23
29-2053	Psychiatric Technicians	462	449	-13	-0.29%	12
29-2054	Respiratory Therapy Technicians	91	101	10	1.05%	3
29-2055	Surgical Technologists	257	267	10	0.38%	8
29-2056	Veterinary Technologists and Technicians	***	***	***	***	***
29-2061	Licensed Practical and Licensed Vocational Nurses	1,928	1,955	27	0.14%	52
29-2071	Medical Records and Health Information Technicians	557	617	60	1.03%	18
29-2081	Opticians, Dispensing	229	172	-57	-2.82%	4
29-2091	Orthotists and Prosthetists	33	31	-2	-0.62%	1
29-9010	Occupational Health and Safety Specialists and Technicians	204	210	6	0.29%	6
29-9090	Miscellaneous Health Practitioners	574	605	31	0.53%	4
31-0000	Healthcare Support Occupations	8,253	9,495	1,242	1.41%	279
31-1011	Home Health Aides	935	1,155	220	2.14%	34
31-1012	Nursing Aides, Orderlies, and Attendants	3,658	4,081	423	1.10%	90
31-1013	Psychiatric Aides	3	3	0	0.00%	0
31-2011	Occupational Therapist Assistants	62	73	11	1.65%	3
31-2012	Occupational Therapist Aides	25	28	3	1.14%	1
31-2021	Physical Therapist Assistants	118	138	20	1.58%	6
31-2022	Physical Therapist Aides	86	102	16	1.72%	4
31-9011	Massage Therapists	22	28	6	2.44%	1
31-9091	Dental Assistants	455	517	62	1.29%	14
31-9092	Medical Assistants	1,749	2,179	430	2.22%	90
31-9093	Medical Equipment Preparers	169	167	-2	-0.12%	4
31-9094	Medical Transcriptionists	306	320	14	0.45%	10
31-9095	Pharmacy Aides	***	***	***	***	***
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	99	120	21	1.94%	5
31-9099	Healthcare Support Workers, All Other	463	471	8	0.17%	13
33-0000	Protective Service Occupations	26,193	30,996	4,803	1.70%	1,183
33-1011	First-Line Supervisors of Correctional Officers	***	***	***	***	***
33-1012	First-Line Supervisors of Police and Detectives	921	996	75	0.79%	32

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
33-1021	First-Line Supervisors					
	Managers of Fire Fighting and Prevention Workers	435	466	31	0.69%	17
33-1099	First-Line Supervisors					
	Managers, Protective Service Workers, All Other	576	620	44	0.74%	22
33-2011	Fire Fighters	1,885	2,211	326	1.61%	81
33-2021	Fire Inspectors and Investigators	219	235	16	.71%	7
33-3012	Correctional Officers and Jailers	1,982	2,740	758	3.29%	124
33-3021	Detectives and Criminal Investigators	2,470	3,465	995	3.44%	155
33-3031	Fish and Game Wardens	1	1	0	0.00%	0
33-3041	Parking Enforcement Workers	105	112	7	.65%	2
33-3051	Police and Sheriff's Patrol Officers	5,557	6,876	1,319	2.15%	249
33-3052	Transit and Railroad Police	***	***	***	***	***
33-9021	Private Detectives and Investigators	230	310	80	3.03%	15
33-9032	Security Guards	10,649	11,730	1,081	0.97%	399
33-9091	Crossing Guards	235	234	-1	-.04%	8
33-9099	Protective Service Workers, All Other	816	857	41	0.49%	67
35-0000	Food Preparation					
	and Serving Related Occupations	33,778	25,411	-8,367	-2.81%	1,730
35-1011	Chefs and Head Cooks	556	566	10	0.18%	18
35-1012	First-Line Supervisors					
	Managers of Food Preparation					
	and Serving Workers	1,355	1,488	133	0.94%	48
35-2011	Cooks, Fast Food	1,941	1,734	-207	-1.12%	56
35-2012	Cooks, Institution and Cafeteria	933	1,016	83	0.86%	35
35-2014	Cooks, Restaurant	2,493	2,742	249	0.96%	96
35-2015	Cooks, Short Order	1,333	1,273	-60	-0.46%	38
35-2021	Food Preparation Workers	3,585	3,826	241	0.65%	163
35-3011	Bartenders	1,109	1,169	60	0.53%	50
35-3021	Combined Food Preparation					
	and Serving Workers, Including Fast Food	4,969	5,941	972	1.80%	402
35-3022	Counter Attendants, Cafeteria, Food Concession,					
	and Coffee Shop	917	927	10	0.11%	72
35-3031	Waiters and Waitresses	8,145	8,494	349	0.42%	494
35-3041	Food Servers, Nonrestaurant	978	1,165	187	1.77%	62
35-9011	Dining Room and Cafeteria Attendants					
	and Bartender Helpers	1,151	1,109	-42	-0.37%	39
35-9021	Dishwashers	2,452	2,181	-271	-1.16%	92
35-9031	Hosts and Hostesses, Restaurant, Lounge,					
	and Coffee Shop	1,032	1,057	25	0.24%	34
35-9099	Food Preparation and Serving Related Workers,					
	All Other	829	723	-106	-1.36%	31
37-0000	Building and Grounds Cleaning					
	and Maintenance Occupations	30,813	36,494	5,681	1.71%	1,198
37-1011	First-Line Supervisors					
	Managers of Housekeeping					
	and Janitorial Workers	4,224	4,995	771	1.69%	192

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
37-1012	First-Line Supervisors Managers of Landscaping, Lawn Service, and Groundskeeping Workers	434	449	15	0.34%	4
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	18,721	21,681	2,960	1.48%	638
37-2012	Maids and Housekeeping Cleaners	5,768	7,468	1,700	2.62%	297
37-2021	Pest Control Workers	17	20	3	1.64%	1
37-3011	Landscaping and Groundskeeping Workers	1,412	1,641	229	1.51%	60
37-3013	Tree Trimmers and Pruners	45	38	-7	-1.68%	1
37-9099	Building and Grounds Cleaning and Maintenance Workers, All Other (OES Only)	192	202	10	0.51%	5
39-0000	Personal Care and Service Workers Occupations	10,049	11,904	1,855	1.71%	525
39-1021	First-Line Supervisors Managers of Personal Service Workers	176	169	-7	-0.41%	6
39-2021	Nonfarm Animal Caretakers	408	462	54	1.25%	15
39-3021	Motion Picture Projectionists	16	9	-7	-5.59%	0
39-3031	Ushers, Lobby Attendants, and Ticket Takers	504	610	106	1.93%	51
39-3091	Amusement and Recreation Attendants	78	100	22	2.52%	5
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	528	640	112	1.94%	37
39-4011	Embalmers	9	6	-3	-3.97%	0
39-4021	Funeral Attendants	15	12	-3	-2.21%	0
39-5011	Barbers	430	548	118	2.45%	29
39-5012	Hairdressers, Hairstylists, and Cosmetologists	957	1,001	44	0.45%	33
39-5092	Manicurists and Pedicurists	90	103	13	1.36%	4
39-5093	Shampooers	486	483	-3	-0.06%	14
39-5094	Skin Care Specialists	70	69	-1	-0.14%	2
39-6011	Baggage Porters and Bellhops	1,208	1,378	170	1.33%	59
39-6012	Concierges	243	303	60	2.23%	14
39-6021	Tour Guides and Escorts	140	157	17	1.15%	6
39-6022	Travel Guides	14	18	4	2.54%	1
39-6032	Transportation Attendants, Except Flight Attendants and Baggage Porters	66	74	8	1.15%	3
39-9011	Child Care Workers	1,586	1,917	331	1.91%	96
39-9021	Personal and Home Care Aides	514	772	258	4.15%	34
39-9031	Fitness Trainers and Aerobics Instructors	655	927	272	3.53%	41
39-9032	Recreation Workers	***	***	***	***	***
39-9041	Residential Advisors	826	943	117	1.33%	31
39-9099	Personal Care and Service Workers, All Other	442	568	126	2.54%	27
41-0000	Sales and Related Occupations	28,261	29,066	805	0.28%	976
41-1011	First-Line Supervisors Managers of Retail Sales Workers	4,077	4,111	34	0.08%	71
41-1012	First-Line Supervisors Managers of Non-Retail Sales Workers	878	824	-54	-0.63%	14
41-2011	Cashiers	6,419	6,744	325	0.50%	325
41-2012	Gaming Change Persons and Booth Cashiers	***	***	***	***	***
41-2021	Counter and Rental Clerks	396	452	56	1.33%	24
41-2022	Parts Salespersons	105	117	12	1.09%	4

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
41-2031	Retail Salespersons	5,419	5,507	88	0.16%	218
41-3011	Advertising Sales Agents	473	554	81	1.59%	18
41-3021	Insurance Sales Agents	403	373	-30	-0.77%	12
41-3031	Securities, Commodities, and Financial Services Sales Agents	643	777	134	1.91%	19
41-3041	Travel Agents	637	695	58	0.88%	22
41-3099	Sales Representatives, Services, All Other	278	281	3	0.11%	7
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	266	250	-16	-0.62%	7
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,568	1,588	20	0.13%	46
41-9011	Demonstrators and Product Promoters	133	132	-1	-0.08%	4
41-9021	Real Estate Brokers	247	276	29	1.12%	9
41-9022	Real Estate Sales Agents	1,483	1,634	151	0.97%	49
41-9031	Sales Engineers	***	***	***	***	***
41-9041	Telemarketers	2,597	2,590	-7	-0.03%	56
41-9091	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers	407	226	-181	-5.71%	14
41-9099	Sales and Related Workers, All Other	1,452	1,588	136	0.90%	47
43-0000	Office and Administrative Support Occupations	153,621	156,317	2,696	0.17%	3,848
43-1011	First-Line Supervisors Managers of Office and Administrative Support Workers	7,668	7,785	117	0.15%	160
43-2011	Switchboard Operators, Including Answering Service	906	719	-187	-2.29%	27
43-2021	Telephone Operators	187	115	-72	-4.75%	6
43-2099	Communications Equipment Operators, All Other	430	320	-110	-2.91%	14
43-3011	Bill and Account Collectors	1,879	2,194	315	1.56%	79
43-3021	Billing and Posting Clerks and Machine Operators	1,788	1,778	-10	-0.06%	44
43-3031	Bookkeeping, Accounting, and Auditing Clerks	5,583	5,634	51	0.09%	115
43-3051	Payroll and Timekeeping Clerks	940	936	-4	-0.04%	27
43-3061	Procurement Clerks	715	621	-94	-1.40%	16
43-3071	Tellers	834	761	-73	-0.91%	40
43-4011	Brokerage Clerks	193	183	-10	-0.53%	3
43-4021	Correspondence Clerks	193	191	-2	-0.10%	6
43-4031	Court, Municipal, and License Clerks	32	34	2	0.61%	1
43-4041	Credit Authorizers, Checkers, and Clerks	118	109	-9	-.79%	1
43-4051	Customer Service Representatives	4,360	5,099	739	1.58%	111
43-4061	Eligibility Interviewers, Government Programs	172	147	-25	-1.56%	5
43-4071	File Clerks	882	888	6	0.07%	29
43-4081	Hotel, Motel, and Resort Desk Clerks	697	986	289	3.53%	59
43-4111	Interviewers, Except Eligibility and Loan	451	517	66	1.38%	16
43-4121	Library Assistants, Clerical	578	613	35	0.59%	29
43-4131	Loan Interviewers and Clerks	***	***	***	***	***
43-4141	New Accounts Clerks	106	110	4	0.37%	3
43-4151	Order Clerks	690	503	-187	-3.11%	15

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	2,098	2,259	161	0.74%	64
43-4171	Receptionists and Information Clerks	5,571	5,751	180	0.32%	142
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	314	383	69	2.01%	15
43-4199	Information and Record Clerks, All Other	41	41	0	0.00%	1
43-4999	Financial, Information, and Record Clerks, All Other (OES Only)	1,120	1,328	208	1.72%	36
43-5011	Cargo and Freight Agents	31	29	-2	-0.66%	1
43-5021	Couriers and Messengers	537	532	-5	-0.09%	15
43-5031	Police, Fire, and Ambulance Dispatchers	288	306	18	0.61%	7
43-5032	Dispatchers, Except Police, Fire, and Ambulance	231	245	14	0.59%	5
43-5041	Meter Readers, Utilities	***	***	***	***	***
43-5051	Postal Service Clerks	730	757	27	0.36%	19
43-5052	Postal Service Mail Carriers	2,698	2,800	102	0.37%	92
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	3,898	3,914	16	0.04%	87
43-5061	Production, Planning, and Expediting Clerks	684	862	178	2.34%	29
43-5071	Shipping, Receiving, and Traffic Clerks	1,695	1,759	64	0.37%	41
43-5081	Stock Clerks and Order Fillers	3,496	3,303	-193	-0.57%	124
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	***	***	***	***	***
43-5199	Material Recording, Scheduling, Dispatching, and Distributing Workers, All Other (OES Only)	440	407	-33	-0.78%	16
43-6011	Executive Secretaries and Administrative Assistants	13,441	14,171	730	0.53%	303
43-6012	Legal Secretaries	10,507	12,219	1,712	1.52%	351
43-6013	Medical Secretaries	1,256	1,242	-14	-0.11%	22
43-6014	Secretaries, Except Legal, Medical, and Executive	16,776	15,768	-1,008	-0.62%	288
43-9011	Computer Operators	1,111	928	-183	-1.78%	20
43-9021	Data Entry Keyers	4,160	4,547	387	0.89%	105
43-9022	Word Processors and Typists	4,724	3,719	-1,005	-2.36%	97
43-9031	Desktop Publishers	230	398	168	5.64%	21
43-9041	Insurance Claims and Policy Processing Clerks	972	675	-297	-3.58%	17
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	2,251	2,228	-23	-0.10%	66
43-9061	Office Clerks, General	12,635	15,340	2,705	1.96%	514
43-9071	Office Machine Operators, Except Computer	814	796	-18	-0.22%	29
43-9081	Proofreaders and Copy Markers	155	147	-8	-0.53%	6
43-9111	Statistical Assistants	213	209	-4	-0.19%	2
43-9199	Office and Administrative Support Workers, All Other	17	17	0	0.00%	0
43-9999	Secretaries, Administrative Assistants, and Other Office Support Workers, All Other (OES Only)	30,867	28,849	-2,018	-0.67%	504
45-0000	Farming, Fishing and Forestry Occupations	4,022	5,398	1,376	2.99%	214
45-1011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers	80	94	14	1.63%	4
45-2011	Agricultural Inspectors	68	74	6	0.85%	2
45-2091	Agricultural Equipment Operators	***	***	***	***	***

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	19	21	2	1.01%	1
45-2093	Farmworkers, Farm and Ranch Animals	262	308	46	1.63%	9
45-9099	Farming, Fishing, and Forestry Workers, All Other (OES Only)	3,439	4,711	1,272	3.20%	189
47-0000	Construction and Extraction Occupations	12,398	13,507	1,109	0.86%	374
47-1011	First-Line Supervisors Managers of Construction Trades and Extraction Workers	985	1,152	167	1.58%	43
47-2021	Brickmasons and Blockmasons	141	153	12	0.82%	4
47-2022	Stonemasons	24	26	2	0.80%	1
47-2031	Carpenters	2,359	2,470	111	0.46%	56
47-2041	Carpet Installers	65	73	8	1.17%	2
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	34	38	4	1.12%	1
47-2044	Tile and Marble Setters	4	4	0	0.00%	0
47-2051	Cement Masons and Concrete Finishers	166	172	6	0.36%	2
47-2053	Terrazzo Workers and Finishers	***	***	***	***	***
47-2061	Construction Laborers	1,998	2,246	248	1.18%	43
47-2071	Paving, Surfacing, and Tamping Equipment Operators	20	21	1	0.49%	1
47-2072	Pile-Driver Operators	***	***	***	***	***
47-2073	Operating Engineers and Other Construction Equipment Operators	488	558	70	1.35%	18
47-2081	Drywall and Ceiling Tile Installers	179	189	10	0.55%	3
47-2111	Electricians	1,681	1,899	218	1.23%	54
47-2121	Glaziers	13	14	1	0.74%	0
47-2130	Insulation Workers	29	32	3	0.99%	1
47-2141	Painters, Construction and Maintenance	964	1,074	110	1.09%	31
47-2142	Paperhangers	16	23	7	3.70%	1
47-2151	Pipelayers	176	200	24	1.29%	6
47-2152	Plumbers, Pipefitters, and Steamfitters	1,079	1,091	12	0.11%	20
47-2161	Plasterers and Stucco Masons	78	83	5	0.62%	2
47-2171	Reinforcing Iron and Rebar Workers	***	***	***	***	***
47-2181	Roofers	46	54	8	1.62%	2
47-2211	Sheet Metal Workers	159	173	14	0.85%	5
47-2221	Structural Iron and Steel Workers	6	7	1	1.55%	0
47-3011	Helpers-Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	238	217	-21	-0.92%	12
47-3012	Helpers-Carpenters	93	96	3	0.32%	5
47-3013	Helpers-Electricians	227	245	18	0.77%	13
47-3014	Helpers-Painters, Paperhangers, Plasterers, and Stucco Masons	12	13	1	0.80%	1
47-3015	Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters	73	79	6	0.79%	4
47-3019	Helpers, Construction Trades, All Other	39	43	4	0.98%	2
47-4011	Construction and Building Inspectors	93	89	-4	-0.44%	2
47-4021	Elevator Installers and Repairers	396	367	-29	-0.76%	13

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
47-4051	Highway Maintenance Workers	16	16	0	0.00%	0
47-4061	Rail-Track Laying and Maintenance Equipment Operators	***	***	***	***	***
47-4999	Construction Trades and Related Workers, All Other (OES Only)	228	297	69	2.68%	17
47-5021	Earth Drillers, Except Oil and Gas	184	209	25	1.28%	7
47-5081	Helpers-Extraction Workers	***	***	***	***	***
49-0000	Installation, Maintenance, and Repair Occupations	11,062	10,802	-260	-0.24%	262
49-1011	First-Line Supervisors Managers of Mechanics, Installers, and Repairers	899	965	66	0.71%	30
49-2011	Computer, Automated Teller, and Office Machine Repairers	142	136	-6	-0.43%	2
49-2021	Radio Mechanics	***	***	***	***	***
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	840	486	-354	-5.32%	16
49-2091	Avionics Technicians	***	***	***	***	***
49-2092	Electric Motor, Power Tool, and Related Repairers	77	78	1	0.13%	2
49-2093	Electrical and Electronics Installers, and Repairers, Transportation Equipment	***	***	***	***	***
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	222	199	-23	-1.09%	4
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	***	***	***	***	***
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	4	4	0	0.00%	0
49-2098	Security and Fire Alarm Systems Installers	100	119	19	1.75%	4
49-2099	Electrical and Electronic Equipment Mechanics, Installers, and Repairers, All Other (OES Only)	36	45	9	2.26%	2
49-3011	Aircraft Mechanics and Service Technicians	29	25	-4	-1.47%	1
49-3021	Automotive Body and Related Repairers	62	60	-2	-0.33%	2
49-3022	Automotive Glass Installers and Repairers	9	4	-5	-7.79%	0
49-3023	Automotive Service Technicians and Mechanics	946	921	-25	-0.27%	24
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	100	113	13	1.23%	4
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	112	117	5	0.44%	3
49-3051	Motorboat Mechanics	1	0	-1	-100.00%	0
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	18	17	-1	-0.57%	1
49-3091	Bicycle Repairers	***	***	***	***	***
49-3093	Tire Repairers and Changers	***	***	***	***	***
49-3099	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers, All Other (OES Only)	27	25	-2	-0.77%	1

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	49	48	-1	-0.21%	2
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	539	594	55	0.98%	12
49-9031	Home Appliance Repairers	49	47	-2	-0.42%	1
49-9041	Industrial Machinery Mechanics	156	164	8	0.50%	5
49-9042	Maintenance and Repair Workers, General	4,213	4,339	126	0.30%	67
49-9043	Maintenance Workers, Machinery	350	397	47	1.27%	14
49-9044	Millwrights	***	***	***	***	***
49-9051	Electrical Power-Line Installers and Repairers	***	***	***	***	***
49-9052	Telecommunications Line Installers and Repairers	4	7	3	5.76%	0
49-9061	Camera and Photographic Equipment Repairers	12	9	-3	-2.84%	0
49-9062	Medical Equipment Repairers	64	59	-5	-0.81%	2
49-9063	Musical Instrument Repairers and Tuners	7	6	-1	-1.53%	0
49-9069	Precision Instrument and Equipment Repairers, All Other	102	91	-11	-1.13%	3
49-9093	Fabric Menders, Except Garment	2	3	1	4.14%	0
49-9094	Locksmiths and Safe Repairers	102	101	-1	-0.10%	4
49-9096	Riggers	30	31	1	0.33%	1
49-9098	Helpers-Installation, Maintenance, and Repair Workers	258	262	4	0.15%	14
49-9099	Installation, Maintenance, and Repair Workers, All Other	631	625	-6	-0.10%	14
51-0000	Production Occupations	9,026	9,298	272	0.30%	275
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	681	655	-26	-0.39%	18
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	***	***	***	***	***
51-2021	Coil Winders, Tapers, and Finishers	***	***	***	***	***
51-2022	Electrical and Electronic Equipment Assemblers	53	50	-3	-0.58%	1
51-2092	Team Assemblers	64	62	-2	-0.32%	1
51-2099	Assemblers and Fabricators, All Other	10	6	-4	-4.98%	0
51-3011	Bakers	566	644	78	1.30%	17
51-3021	Butchers and Meat Cutters	80	75	-5	-0.64%	2
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	120	125	5	0.41%	3
51-3092	Food Batchmakers	***	***	***	***	***
51-3093	Food Cooking Machine Operators and Tenders	***	***	***	***	***
51-3099	Food Processing Workers, All Other (OES Only)	***	***	***	***	***
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1	1	0	0.00%	0
51-4041	Machinists	184	171	-13	-0.73%	4
51-4111	Tool and Die Makers	8	8	0	0.00%	0
51-4121	Welders, Cutters, Solderers, and Brazers	120	137	17	1.33%	5
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	16	20	4	2.26%	1
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	18	20	2	1.06%	1
51-4199	Metal Workers and Plastic Workers, All Other	5	5	0	0.00%	0

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
51-5011	Bindery Workers	672	702	30	0.44%	21
51-5012	Bookbinders	136	144	8	0.57%	4
51-5021	Job Printers	208	232	24	1.10%	8
51-5022	Prepress Technicians and Workers	717	616	-101	-1.51%	18
51-5023	Printing Machine Operators	1,075	1,147	72	0.65%	35
51-5099	Printing Workers, All Other (OES Only)	***	***	***	***	***
51-6011	Laundry and Dry-Cleaning Workers	710	855	145	1.88%	34
51-6021	Pressers, Textile, Garment, and Related Materials	364	381	17	0.46%	7
51-6031	Sewing Machine Operators	26	27	1	0.38%	0
51-6041	Shoe and Leather Workers and Repairers	23	17	-6	-2.98%	1
51-6051	Sewers, Hand	3	3	0	0.00%	0
51-6052	Tailors, Dressmakers, and Custom Sewers	126	109	-17	-1.44%	3
51-6093	Upholsterers	41	30	-11	-3.08%	2
51-6099	Textile, Apparel, and Furnishings Workers, All Other	110	126	16	1.37%	4
51-7011	Cabinetmakers and Bench Carpenters	98	90	-8	-0.85%	3
51-7021	Furniture Finishers	7	8	1	1.34%	0
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	1	1	0	0.00%	0
51-7099	Woodworkers, All Other	25	30	5	1.84%	2
51-8012	Power Distributors and Dispatchers	4	3	-1	-2.84%	0
51-8013	Power Plant Operators	***	***	***	***	***
51-8021	Stationary Engineers and Boiler Operators	574	586	12	0.21%	17
51-8031	Water and Liquid Waste Treatment Plant and System Operators	50	54	4	0.77%	2
51-8092	Gas Plant Operators	***	***	***	***	***
51-8099	Plant and System Operators, All Other	269	293	24	0.86%	11
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	15	12	-3	-2.21%	0
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	11	11	0	0.00%	0
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	***	***	***	***	***
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	323	294	-29	-0.94%	7
51-9081	Dental Laboratory Technicians	130	130	0	0.00%	4
51-9082	Medical Appliance Technicians	21	21	0	0.00%	1
51-9083	Ophthalmic Laboratory Technicians	***	***	***	***	***
51-9111	Packaging and Filling Machine Operators and Tenders	44	43	-1	-0.23%	1
51-9122	Painters, Transportation Equipment	18	20	2	1.06%	1
51-9123	Painting, Coating, and Decorating Workers	12	14	2	1.55%	0
51-9131	Photographic Process Workers	***	***	***	***	***
51-9132	Photographic Processing Machine Operators	***	***	***	***	***
51-9194	Etchers and Engravers	29	31	2	0.67%	1
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	12	9	-3	-2.84%	0

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
51-9196	Paper Goods Machine Setters, Operators, and Tenders	***	***	***	***	***
51-9198	Helpers-Production Workers	***	***	***	***	***
51-9199	Production Workers, All Other	482	523	41	0.82%	13
53-0000	Transportation and Material Moving Occupations	18,326	19,305	979	0.52%	586
53-1011	Aircraft Cargo Handling Supervisors	***	***	***	***	***
53-1021	First-Line Supervisors Managers of Helpers, Laborers, and Material Movers, Hand	268	266	-2	-0.07%	6
53-1031	First-Line Supervisors Managers of Transportation and Material-Moving Machine and Vehicle Operators	897	939	42	0.46%	24
53-2011	Airline Pilots, Copilots, and Flight Engineers	8	7	-1	-1.33%	0
53-2012	Commercial Pilots	2	2	0	0.00%	0
53-2021	Air Traffic Controllers	208	246	38	1.69%	13
53-2022	Airfield Operations Specialists	***	***	***	***	***
53-2099	Air Transportation Workers, All Other (OES Only)	142	141	-1	-0.07%	6
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	***	***	***	***	***
53-3021	Bus Drivers, Transit and Intercity	199	254	55	2.47%	11
53-3022	Bus Drivers, School	475	450	-25	-0.54%	12
53-3031	Driver/Sales Workers	1,138	1,141	3	0.03%	16
53-3032	Truck Drivers, Heavy and Tractor-Trailer	732	805	73	0.96%	18
53-3033	Truck Drivers, Light or Delivery Services	1,839	1,904	65	0.35%	33
53-3041	Taxi Drivers and Chauffeurs	282	302	20	0.69%	5
53-3099	Motor Vehicle Operators, All Other	604	630	26	0.42%	13
53-4011	Locomotive Engineers	***	***	***	***	***
53-4012	Locomotive Firers	***	***	***	***	***
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	***	***	***	***	***
53-4031	Railroad Conductors and Yardmasters	***	***	***	***	***
53-4099	Rail Transportation Workers, All Other	68	83	15	2.01%	5
53-5011	Sailors and Marine Oilers	4	4	0	0.00%	0
53-5022	Motorboat Operators	2	2	0	0.00%	0
53-5031	Ship Engineers	***	***	***	***	***
53-6011	Bridge and Lock Tenders	350	279	-71	-2.24%	12
53-6021	Parking Lot Attendants	1,892	1,968	76	0.39%	40
53-6031	Service Station Attendants	1	1	0	0.00%	0
53-6041	Traffic Technicians	***	***	***	***	***
53-6051	Transportation Inspectors	256	271	15	0.57%	8
53-6099	Transportation Workers, All Other	125	133	8	0.62%	6
53-7011	Conveyor Operators and Tenders	109	117	8	0.71%	4
53-7021	Crane and Tower Operators	102	124	22	1.97%	5
53-7032	Excavating and Loading Machine and Dragline Operators	21	19	-2	-1.00%	1
53-7051	Industrial Truck and Tractor Operators	294	279	-15	-0.52%	4
53-7061	Cleaners of Vehicles and Equipment	396	410	14	0.35%	17

Appendix (cont.)

Appendix Table 3 – D.C. Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	5,990	6,465	475	0.77%	249
53-7063	Machine Feeders and Offbearers	***	***	***	***	***
53-7064	Packers and Packagers, Hand	480	469	-11	-0.23%	12
53-7071	Gas Compressor and Gas Pumping Station Operators	104	115	11	1.01%	4
53-7081	Refuse and Recyclable Material Collectors	772	849	77	0.96%	41
53-7199	Material Moving Workers, All Other	179	196	17	0.91%	8



Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
00-0000	Total, All Occupations	2,979,463	3,475,017	495,554	1.39%	117,666
11-0000	Management Occupations	269,171	310,237	41,066	1.43%	8,926
11-1011	Chief Executives	19,088	21,909	2,821	1.39%	881
11-1021	General and Operations Managers	63,514	72,078	8,564	1.27%	1,926
11-1031	Legislators	313	360	47	1.41%	14
11-2011	Advertising and Promotions Managers	3,407	4,402	995	2.60%	148
11-2021	Marketing Managers	6,813	8,431	1,618	2.15%	260
11-2022	Sales Managers	7,100	9,744	2,644	3.22%	367
11-2031	Public Relations Managers	4,649	5,982	1,333	2.55%	205
11-3011	Administrative Services Managers	11,834	13,838	2,004	1.58%	393
11-3021	Computer and Information Systems Managers	15,928	21,790	5,862	3.18%	855
11-3031	Financial Managers	18,259	20,745	2,486	1.28%	528
11-3040	Human Resources Managers	7,723	8,510	787	0.98%	212
11-3051	Industrial Production Managers	1,652	1,851	199	1.14%	47
11-3061	Purchasing Managers	3,575	3,403	-172	-0.49%	112
11-3071	Transportation, Storage, and Distribution Managers	3,272	3,934	662	1.86%	120
11-9011	Farm, Ranch, and Other Agricultural Managers	426	539	113	2.38%	16
11-9012	Farmers and Ranchers	2,446	2,652	206	0.81%	35
11-9021	Construction Managers	7,316	8,366	1,050	1.35%	224
11-9031	Education Administrators, Preschool and Child Care Center/Program	1,318	2,069	751	4.61%	109
11-9032	Education Administrators, Elementary and Secondary School	3,454	4,128	674	1.80%	157
11-9033	Education Administrators, Postsecondary	1,585	1,755	170	1.02%	58
11-9041	Engineering Managers	9,017	10,077	1,060	1.12%	253
11-9051	Food Service Managers	8,766	10,382	1,616	1.71%	265
11-9061	Funeral Directors	264	258	-6	-0.23%	5
11-9071	Gaming Managers	***	***	***	***	***
11-9081	Lodging Managers	1,737	1,934	197	1.08%	40
11-9111	Medical and Health Services Managers	5,425	6,744	1,319	2.20%	225
11-9121	Natural Sciences Managers	3,387	3,367	-20	-0.06%	60
11-9131	Postmasters and Mail Superintendents	223	232	9	0.40%	5
11-9141	Property, Real Estate, and Community Association Managers	7,182	8,108	926	1.22%	210
11-9151	Social and Community Service Managers	3,765	4,636	871	2.10%	158
11-9199	Managers, All Other	45,728	48,008	2,280	0.49%	1,038
13-0000	Bus. and Fin Operations Occupations	205,905	240,006	34,101	1.54%	6,847
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	814	950	136	1.56%	30
13-1021	Purchasing Agents and Buyers, Farm Products	240	299	59	2.22%	11
13-1022	Wholesale and Retail Buyers, Except Farm Products	1,774	1,720	-54	-0.31%	54
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	9,067	10,265	1,198	1.25%	300
13-1031	Claims Adjusters, Examiners, and Investigators	2,750	3,180	430	1.46%	74
13-1032	Insurance Appraisers, Auto Damage	114	128	14	1.17%	3

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	3,987	4,266	279	0.68%	129
13-1051	Cost Estimators	4,595	5,578	983	1.96%	200
13-1061	Emergency Management Specialists	471	598	127	2.42%	26
13-1071	Employment, Recruitment, and Placement Specialists	6,127	6,389	262	0.42%	145
13-1072	Compensation, Benefits, and Job Analysis Specialists	2,494	2,947	453	1.68%	93
13-1073	Training and Development Specialists	6,293	7,378	1,085	1.60%	230
13-1111	Management Analysts	59,132	71,329	12,197	1.89%	1,739
13-1121	Meeting and Convention Planners	3,386	3,895	509	1.41%	114
13-1199	Business Operations Specialists, All Other	37,103	42,416	5,313	1.35%	1,473
13-2011	Accountants and Auditors	33,028	37,083	4,055	1.16%	895
13-2021	Appraisers and Assessors of Real Estate	588	636	48	0.79%	21
13-2031	Budget Analysts	6,072	7,320	1,248	1.89%	246
13-2041	Credit Analysts	786	953	167	1.95%	32
13-2051	Financial Analysts	5,500	6,794	1,294	2.14%	204
13-2052	Personal Financial Advisors	3,760	4,871	1,111	2.62%	155
13-2053	Insurance Underwriters	1,470	1,620	150	0.98%	37
13-2061	Financial Examiners	544	594	50	0.88%	16
13-2071	Loan Counselors	661	798	137	1.90%	27
13-2072	Loan Officers	4,893	5,283	390	0.77%	136
13-2081	Tax Examiners, Collectors, and Revenue Agents	970	1,072	102	1.00%	36
13-2082	Tax Preparers	2,671	3,264	593	2.03%	113
13-2099	Financial Specialists, All Other	6,624	8,380	1,756	2.38%	308
15-0000	Computer and Mathematical Occupations	175,491	260,907	85,416	4.05%	10,338
15-1011	Computer and Information Scientists, Research	3,772	4,590	818	1.98%	115
15-1021	Computer Programmers	26,547	28,413	1,866	0.68%	744
15-1031	Computer Software Engineers, Applications	17,030	29,828	12,798	5.76%	1,394
15-1032	Computer Software Engineers, Systems Software	20,678	36,888	16,210	5.96%	1,759
15-1041	Computer Support Specialists	15,297	27,545	12,248	6.06%	1,290
15-1051	Computer Systems Analysts	41,196	57,268	16,072	3.35%	1,969
15-1061	Database Administrators	7,604	12,318	4,714	4.94%	504
15-1071	Network and Computer Systems Administrators	11,017	19,569	8,552	5.91%	902
15-1081	Network Systems and Data Communications Analysts	5,532	9,071	3,539	5.07%	377
15-1099	Computer Specialists, All Other	17,228	26,314	9,086	4.33%	1,060
15-2011	Actuaries	534	487	-47	-0.92%	7
15-2021	Mathematicians	534	483	-51	-1.00%	7
15-2031	Operations Research Analysts	5,125	5,020	-105	-0.21%	165
15-2041	Statisticians	3,153	2,857	-296	-0.98%	40
15-2091	Mathematical Technicians	79	85	6	0.73%	2
15-2099	Mathematical Science Occupations, All Other	163	171	8	0.48%	3
17-0000	Architectural and Engineering Occupations	79,940	90,344	10,404	1.23%	2,644

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
17-1011	Architects, Except Landscape and Naval	4,718	5,389	671	1.34%	94
17-1012	Landscape Architects	665	816	151	2.07%	19
17-1021	Cartographers and Photogrammetrists	611	628	17	0.27%	20
17-1022	Surveyors	1,244	1,309	65	0.51%	44
17-1099	Architects, Surveyors, and Cartographers, All Other (OES Only)	425	528	103	2.19%	13
17-2011	Aerospace Engineers	3,764	4,737	973	2.33%	208
17-2021	Agricultural Engineers	19	19	0	0.00%	0
17-2031	Biomedical Engineers	197	234	37	1.74%	8
17-2041	Chemical Engineers	692	758	66	0.92%	19
17-2051	Civil Engineers	5,800	6,139	339	0.57%	125
17-2061	Computer Hardware Engineers	4,034	4,861	827	1.88%	140
17-2071	Electrical Engineers	8,520	10,390	1,870	2.00%	343
17-2072	Electronics Engineers, Except Computer	6,822	7,585	763	1.07%	202
17-2081	Environmental Engineers	1,419	1,695	276	1.79%	56
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1,350	1,497	147	1.04%	37
17-2112	Industrial Engineers	2,011	2,221	210	1.00%	55
17-2121	Marine Engineers and Naval Architects	740	726	-14	-0.19%	16
17-2131	Materials Engineers	340	333	-7	-0.21%	7
17-2141	Mechanical Engineers	4,467	4,957	490	1.05%	180
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	33	32	-1	-0.31%	1
17-2161	Nuclear Engineers	405	415	10	0.24%	10
17-2171	Petroleum Engineers	63	65	2	0.31%	2
17-2199	Engineers, All Other	9,711	9,641	-70	-0.07%	194
17-3011	Architectural and Civil Drafters	1,695	1,985	290	1.59%	80
17-3012	Electrical and Electronics Drafters	1,705	2,212	507	2.64%	102
17-3013	Mechanical Drafters	838	1,026	188	2.04%	44
17-3021	Aerospace Engineering and Operations Technicians	112	111	-1	-0.09%	2
17-3022	Civil Engineering Technicians	1,552	1,753	201	1.23%	52
17-3023	Electrical and Electronic Engineering Technicians	6,089	6,801	712	1.11%	194
17-3024	Electro-Mechanical Technicians	243	273	30	1.17%	8
17-3025	Environmental Engineering Technicians	379	452	73	1.78%	15
17-3026	Industrial Engineering Technicians	1,157	1,492	335	2.58%	57
17-3027	Mechanical Engineering Technicians	1,063	1,251	188	1.64%	40
17-3031	Surveying and Mapping Technicians	768	906	138	1.67%	39
17-3099	Drafters, Engineering, and Mapping Technicians, All Other (OES Only)	6,292	7,107	815	1.23%	218
19-0000	Life, Physical and Soc Science Occupations	57,618	63,311	5,693	0.95%	2,204
19-1010	Agricultural and Food Scientists	4,775	5,116	341	0.69%	189
19-1021	Biochemists and Biophysicists	372	422	50	1.27%	18
19-1022	Microbiologists	1,849	2,110	261	1.33%	93
19-1023	Zoologists and Wildlife Biologists	465	497	32	0.67%	20
19-1031	Conservation Scientists	239	259	20	0.81%	10
19-1032	Foresters	69	75	6	0.84%	3
19-1041	Epidemiologists	75	78	3	0.39%	2
19-1042	Medical Scientists, Except Epidemiologists	3,394	3,684	290	0.82%	106

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
19-1099	Life Scientists, All Other	1,058	1,110	52	0.48%	43
19-2011	Astronomers	280	295	15	0.52%	11
19-2012	Physicists	1,734	1,882	148	0.82%	71
19-2021	Atmospheric and Space Scientists	743	830	87	1.11%	33
19-2031	Chemists	2,582	2,774	192	0.72%	100
19-2032	Materials Scientists	86	94	8	0.89%	4
19-2041	Environmental Scientists and Specialists, Including Health	3,064	3,403	339	1.05%	134
19-2042	Geoscientists, Except Hydrologists and Geographers	637	707	70	1.05%	28
19-2043	Hydrologists	259	290	31	1.14%	12
19-2099	Physical Scientists, All Other	3,892	4,484	592	1.43%	224
19-3011	Economists	6,175	6,642	467	0.73%	183
19-3021	Market Research Analysts	4,207	4,833	626	1.40%	156
19-3022	Survey Researchers	732	791	59	0.78%	22
19-3031	Clinical, Counseling, and School Psychologists	3,398	3,823	425	1.19%	122
19-3032	Industrial-Organizational Psychologists	228	245	17	0.72%	7
19-3041	Sociologists	291	343	52	1.66%	13
19-3051	Urban and Regional Planners	683	854	171	2.26%	34
19-3091	Anthropologists and Archeologists	143	148	5	0.34%	4
19-3092	Geographers	174	184	10	0.56%	5
19-3093	Historians	276	290	14	0.50%	8
19-3094	Political Scientists	3,792	4,047	255	0.65%	120
19-3099	Social Scientists and Related Workers, All Other	5,060	5,586	526	0.99%	175
19-4011	Agricultural and Food Science Technicians	707	725	18	0.25%	18
19-4021	Biological Technicians	2,406	2,541	135	0.55%	70
19-4031	Chemical Technicians	618	689	71	1.09%	21
19-4041	Geological and Petroleum Technicians	22	26	4	1.68%	1
19-4051	Nuclear Technicians	18	23	5	2.48%	1
19-4091	Environmental Science and Protection Technicians, Including Health	530	557	27	0.50%	22
19-4092	Forensic Science Technicians	50	59	9	1.67%	3
19-4093	Forest and Conservation Technicians	115	143	28	2.20%	7
19-4099	Life, Physical, and Social Science Technicians, All Other	2,417	2,650	233	0.92%	111
21-0000	Community and Social Service Occupations	31,240	40,135	8,895	2.54%	1,286
21-1011	Substance Abuse and Behavioral Disorder Counselors	1,222	1,450	228	1.73%	48
21-1012	Educational, Vocational, and School Counselors	2,930	3,845	915	2.75%	151
21-1013	Marriage and Family Therapists	331	458	127	3.30%	20
21-1014	Mental Health Counselors	1,974	2,299	325	1.54%	73
21-1015	Rehabilitation Counselors	2,183	2,682	499	2.08%	95
21-1021	Child, Family, and School Social Workers	3,850	5,314	1,464	3.28%	190
21-1022	Medical and Public Health Social Workers	1,460	1,805	345	2.14%	51
21-1023	Mental Health and Substance Abuse Social Workers	1,765	2,365	600	2.97%	80

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
21-1091	Health Educators	1,121	1,299	178	1.48%	35
21-1092	Probation Officers and Correctional Treatment Specialists	1,428	1,758	330	2.10%	54
21-1093	Social and Human Service Assistants	5,878	8,076	2,198	3.23%	307
21-2011	Clergy	869	969	100	1.10%	34
21-2021	Directors, Religious Activities and Education	465	545	80	1.60%	16
21-9099	Counselors, Social, and Religious Workers, All Other (OES Only)	2,979	3,776	797	2.40%	132
21-9999	All Other Counselors, Social, and Religious Workers	2,785	3,494	709	2.29%	0
23-0000	Legal Occupations	61,531	76,487	14,956	2.20%	1,948
23-1011	Lawyers	42,545	53,274	10,729	2.27%	1,359
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	394	415	21	0.52%	13
23-1022	Arbitrators, Mediators, and Conciliators	484	552	68	1.32%	21
23-1023	Judges, Magistrate Judges, and Magistrates	56	52	-4	-0.74%	2
23-2011	Paralegals and Legal Assistants	8,320	10,785	2,465	2.63%	297
23-2091	Court Reporters	128	137	9	0.68%	2
23-2092	Law Clerks	1,325	1,487	162	1.16%	28
23-2093	Title Examiners, Abstractors, and Searchers	946	1,047	101	1.02%	19
23-9099	Legal and Related Workers, All Other (OES Only)	7,337	8,738	1,401	1.76%	207
25-0000	Educations, Training and Library Occupations	149,108	186,159	37,051	2.24%	6,819
25-1011	Business Teachers, Postsecondary	1318	1,607	289	2.00%	65
25-1021	Computer Science Teachers, Postsecondary	709	886	177	2.25%	37
25-1022	Mathematical Science Teachers, Postsecondary	727	869	142	1.80%	34
25-1031	Architecture Teachers, Postsecondary	101	123	22	1.99%	5
25-1032	Engineering Teachers, Postsecondary	624	761	137	2.00%	31
25-1041	Agricultural Sciences Teachers, Postsecondary	92	112	20	1.99%	5
25-1042	Biological Science Teachers, Postsecondary	499	598	99	1.83%	24
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	272	328	56	1.89%	13
25-1052	Chemistry Teachers, Postsecondary	258	304	46	1.65%	12
25-1053	Environmental Science Teachers, Postsecondary	43	52	9	1.92%	2
25-1054	Physics Teachers, Postsecondary	246	297	51	1.90%	12
25-1061	Anthropology and Archeology Teachers, Postsecondary	147	178	31	1.93%	7
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	102	125	23	2.05%	5
25-1063	Economics Teachers, Postsecondary	275	335	60	1.99%	14
25-1064	Geography Teachers, Postsecondary	82	101	19	2.11%	4
25-1065	Political Science Teachers, Postsecondary	601	730	129	1.96%	29
25-1066	Psychology Teachers, Postsecondary	595	722	127	1.95%	29
25-1067	Sociology Teachers, Postsecondary	210	254	44	1.92%	10
25-1071	Health Specialties Teachers, Postsecondary	403	474	71	1.64%	18
25-1072	Nursing Instructors and Teachers, Postsecondary	625	742	117	1.73%	29
25-1081	Education Teachers, Postsecondary	1,072	1,290	218	1.87%	51
25-1082	Library Science Teachers, Postsecondary	57	69	12	1.93%	3
25-1099	Postsecondary Teachers, All Other	2,583	2,881	298	1.10%	0

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	145	174	29	1.84%	7
25-1112	Law Teachers, Postsecondary	431	519	88	1.88%	21
25-1113	Social Work Teachers, Postsecondary	150	180	30	1.84%	7
25-1121	Art, Drama, and Music Teachers, Postsecondary	1,339	1,633	294	2.00%	66
25-1122	Communications Teachers, Postsecondary	358	425	67	1.73%	17
25-1123	English Language and Literature Teachers, Postsecondary	1,231	1,479	248	1.85%	58
25-1124	Foreign Language and Literature Teachers, Postsecondary	583	695	112	1.77%	27
25-1125	History Teachers, Postsecondary	489	595	106	1.98%	24
25-1126	Philosophy and Religion Teachers, Postsecondary	583	710	127	1.99%	29
25-1191	Graduate Teaching Assistants	6,074	7,215	1,141	1.74%	280
25-1192	Home Economics Teachers, Postsecondary	60	73	13	1.98%	3
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	371	451	80	1.97%	18
25-1194	Vocational Education Teachers, Postsecondary	1,529	1,724	195	1.21%	61
25-1199	Postsecondary Teachers, All Other	2,757	3,346	589	1.96%	134
25-2011	Preschool Teachers, Except Special Education	7,540	10,515	2,975	3.38%	391
25-2012	Kindergarten Teachers, Except Special Education	2,760	3,309	549	1.83%	89
25-2021	Elementary School Teachers, Except Special Education	22,362	27,457	5,095	2.07%	1,018
25-2022	Middle School Teachers, Except Special and Vocational Education	8,834	10,238	1,404	1.49%	341
25-2023	Vocational Education Teachers, Middle School	1,004	1,200	196	1.80%	42
25-2031	Secondary School Teachers, Except Special and Vocational Education	15,754	19,693	3,939	2.26%	874
25-2032	Vocational Education Teachers, Secondary School	1,683	2,011	328	1.80%	84
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	2,895	4,174	1,279	3.73%	165
25-2042	Special Education Teachers, Middle School	3,058	4,020	962	2.77%	135
25-2043	Special Education Teachers, Secondary School	2,646	3,477	831	2.77%	117
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	610	712	102	1.56%	16
25-3021	Self-Enrichment Education Teachers	3,163	3,991	828	2.35%	115
25-3999	Teachers, Primary, Secondary, and Adult, All Other (OES Only)	12,535	15,439	2,904	2.11%	416
25-4010	Archivists, Curators, and Museum Technicians	1,690	1,831	141	0.80%	49
25-4021	Librarians	4,762	5,311	549	1.10%	154
25-4031	Library Technicians	2,261	2,658	397	1.63%	140
25-9011	Audio-Visual Collections Specialists	95	107	12	1.20%	3
25-9021	Farm and Home Management Advisors	179	189	10	0.55%	4

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
25-9031	Instructional Coordinators	1,397	1,705	308	2.01%	51
25-9041	Teacher Assistants	23,721	32,188	8467	3.10%	1,343
25-9099	Education, Training, and Library Workers, All Other	3	3	0	0.00%	0
25-9199	Library, Museum, Training, and Other Education Workers, All Other (OES Only)	2,419	2,874	455	1.74%	81
27-0000	Arts, Design, Ent, Sports and Media Occupations	70,459	82,853	12,394	1.63%	2,714
27-1011	Art Directors	1,078	1,231	153	1.34%	38
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	399	430	31	0.75%	11
27-1014	Multi-Media Artists and Animators	1,447	1,685	238	1.53%	54
27-1021	Commercial and Industrial Designers	589	684	95	1.51%	15
27-1022	Fashion Designers	83	97	14	1.57%	2
27-1023	Floral Designers	1,093	1,163	70	0.62%	18
27-1024	Graphic Designers	5,969	7,126	1,157	1.79%	176
27-1025	Interior Designers	1,081	1,238	157	1.37%	27
27-1026	Merchandise Displayers and Window Trimmers	756	870	114	1.41%	19
27-1027	Set and Exhibit Designers	492	557	65	1.25%	11
27-1099	Art and Design Workers, All Other (OES Only)	3,504	3,878	374	1.02%	95
27-2011	Actors	1,627	1,810	183	1.07%	50
27-2012	Producers and Directors	2,893	3,545	652	2.05%	121
27-2021	Athletes and Sports Competitors	517	781	264	4.21%	37
27-2022	Coaches and Scouts	3,165	3,993	828	2.35%	145
27-2023	Umpires, Referees, and Other Sports Officials	129	183	54	3.56%	8
27-2031	Dancers	78	85	7	0.86%	2
27-2032	Choreographers	173	186	13	0.73%	5
27-2041	Music Directors and Composers	159	174	15	0.91%	5
27-2042	Musicians and Singers	722	768	46	0.62%	18
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	978	1,262	284	2.58%	47
27-3010	Announcers	1,307	1,428	121	0.89%	32
27-3020	News Analysts, Reporters and Correspondents	2,715	2,983	268	0.95%	115
27-3031	Public Relations Specialists	6,518	8,200	1,682	2.32%	279
27-3041	Editors	8,472	10,364	1,892	2.04%	464
27-3042	Technical Writers	2,530	2,893	363	1.35%	113
27-3043	Writers and Authors	8,371	9,645	1,274	1.43%	265
27-3091	Interpreters and Translators	908	1,040	132	1.37%	31
27-3099	Media and Communication Workers, All Other	5,333	6,143	810	1.42%	184
27-4011	Audio and Video Equipment Technicians	561	655	94	1.56%	26
27-4012	Broadcast Technicians	1,488	1,845	357	2.17%	80
27-4013	Radio Operators	***	***	***	***	***
27-4014	Sound Engineering Technicians	154	175	21	1.29%	7
27-4021	Photographers	1,744	1,792	48	0.27%	40
27-4031	Camera Operators, Television, Video, and Motion Picture	877	1,062	185	1.93%	36
27-4032	Film and Video Editors	178	227	49	2.46%	9
27-4099	Media and Communication Equipment Workers, All Other	2,346	2,629	283	1.15%	128

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
29-0000	Healthcare Practitioners and Technical Occupations	112,967	135,500	22,533	1.84%	4,587
29-1011	Chiropractors	955	1,036	81	0.82%	26
29-1020	Dentists	3,661	4,036	375	0.98%	120
29-1031	Dietitians and Nutritionists	929	990	61	0.64%	31
29-1041	Optometrists	759	831	72	0.91%	21
29-1051	Pharmacists	3,347	3,968	621	1.72%	162
29-1061	Anesthesiologists	593	739	146	2.23%	23
29-1062	Family and General Practitioners	8,639	10,333	1,694	1.81%	297
29-1063	Internists, General	1,815	2,173	358	1.82%	63
29-1064	Obstetricians and Gynecologists	219	272	53	2.19%	9
29-1065	Pediatricians, General	303	374	71	2.13%	12
29-1066	Psychiatrists	358	400	42	1.12%	10
29-1067	Surgeons	623	775	152	2.21%	24
29-1069	Physicians and Surgeons, All Other	994	1,091	97	0.94%	24
29-1071	Physician Assistants	988	1,470	482	4.05%	70
29-1081	Podiatrists	172	183	11	0.62%	4
29-1111	Registered Nurses	36,652	43,859	7,207	1.81%	1,460
29-1121	Audiologists	426	632	206	4.02%	31
29-1122	Occupational Therapists	1,054	1,300	246	2.12%	51
29-1123	Physical Therapists	2,524	3,097	573	2.07%	121
29-1124	Radiation Therapists	384	398	14	0.36%	9
29-1125	Recreational Therapists	772	825	53	0.67%	25
29-1126	Respiratory Therapists	1,225	1,516	291	2.15%	60
29-1127	Speech-Language Pathologists	1,339	1,790	451	2.95%	79
29-1131	Veterinarians	1,329	1,631	302	2.07%	54
29-1199	Health Diagnosing and Treating Practitioners, All Other	1,505	1,856	351	2.12%	68
29-2011	Medical and Clinical Laboratory Technologists	3,400	3,714	314	0.89%	111
29-2012	Medical and Clinical Laboratory Technicians	2,405	2,549	144	0.58%	71
29-2021	Dental Hygienists	2,776	3,784	1,008	3.15%	141
29-2031	Cardiovascular Technologists and Technicians	861	1,106	245	2.54%	43
29-2032	Diagnostic Medical Sonographers	619	800	181	2.60%	32
29-2033	Nuclear Medicine Technologists	668	815	147	2.01%	29
29-2034	Radiologic Technologists and Technicians	2,455	2,826	371	1.42%	91
29-2041	Emergency Medical Technicians and Paramedics	1,836	2,287	451	2.22%	92
29-2051	Dietetic Technicians	742	873	131	1.64%	32
29-2052	Pharmacy Technicians	3,445	4,528	1,083	2.77%	197
29-2053	Psychiatric Technicians	1,236	1,257	21	0.17%	34
29-2054	Respiratory Therapy Technicians	381	475	94	2.23%	19
29-2055	Surgical Technologists	968	1,150	182	1.74%	43
29-2056	Veterinary Technologists and Technicians	1,050	1,371	321	2.70%	59
29-2061	Licensed Practical and Licensed Vocational Nurses	10,077	12,302	2,225	2.02%	481
29-2071	Medical Records and Health Information Technicians	2,078	2,878	800	3.31%	126
29-2081	Opticians, Dispensing	1,206	1,263	57	0.46%	28
29-2091	Orthotists and Prosthetists	89	92	3	0.33%	3

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
29-9010	Occupational Health and Safety Specialists and Technicians	864	970	106	1.16%	33
29-9091	Athletic Trainers	142	166	24	1.57%	6
29-9099	Healthcare Practitioners and Technical Workers, All Other	4,104	4,719	615	1.41%	62
31-0000	Healthcare Support Occupations	39,706	51,291	11,585	2.59%	1,870
31-1011	Home Health Aides	4,215	5,708	1,493	3.08%	203
31-1012	Nursing Aides, Orderlies, and Attendants	17,547	21,856	4,309	2.22%	655
31-1013	Psychiatric Aides	354	480	126	3.09%	17
31-2011	Occupational Therapist Assistants	182	252	70	3.31%	12
31-2012	Occupational Therapist Aides	76	98	22	2.57%	4
31-2021	Physical Therapist Assistants	440	577	137	2.75%	27
31-2022	Physical Therapist Aides	629	908	279	3.74%	46
31-9011	Massage Therapists	458	558	100	1.99%	20
31-9091	Dental Assistants	4,455	6,075	1,620	3.15%	242
31-9092	Medical Assistants	5,123	7,474	2,351	3.85%	371
31-9093	Medical Equipment Preparers	542	628	86	1.48%	23
31-9094	Medical Transcriptionists	1,094	1,302	208	1.76%	50
31-9095	Pharmacy Aides	706	811	105	1.40%	29
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	1,616	1,979	363	2.05%	79
31-9099	Healthcare Support Workers, All Other	2,269	2,585	316	1.31%	92
33-0000	Protective Service Occupations	72,998	82,789	9,791	1.27%	3,030
33-1011	First-Line Supervisors of Correctional Officers	508	570	62	1.16%	15
33-1012	First-Line Supervisors of Police and Detectives	2,226	2,521	295	1.25%	90
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	1,420	1,487	67	0.46%	52
33-1099	First-Line Supervisors of Managers, Protective Service Workers, All Other	2,202	2,380	178	0.78%	85
33-2011	Fire Fighters	6,197	6,750	553	0.86%	216
33-2021	Fire Inspectors and Investigators	***	***	***	***	***
33-2022	Forest Fire Inspectors and Prevention Specialists	***	***	***	***	***
33-3011	Bailiffs	237	304	67	2.52%	13
33-3012	Correctional Officers and Jailers	6,697	8,083	1,386	1.90%	301
33-3021	Detectives and Criminal Investigators	3,790	5,034	1,244	2.88%	209
33-3031	Fish and Game Wardens	60	59	-1	-0.17%	1
33-3041	Parking Enforcement Workers	***	***	***	***	***
33-3051	Police and Sheriff's Patrol Officers	14,206	17,057	2,851	1.85%	585
33-3052	Transit and Railroad Police	***	***	***	***	***
33-9011	Animal Control Workers	79	97	18	2.07%	8
33-9021	Private Detectives and Investigators	769	869	100	1.23%	32
33-9031	Gaming Surveillance Officers and Gaming Investigators	22	29	7	2.80%	1
33-9032	Security Guards	29,336	31,439	2,103	0.69%	1,011
33-9091	Crossing Guards	909	922	13	0.14%	32

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
33-9099	Protective Service Workers, All Other	3,632	4,484	852	2.13%	363
35-0000	Food Preparation and Serving and Serving Workers	167,560	200,114	32,554	1.79%	10,981
35-1011	Chefs and Head Cooks	2,419	2,760	341	1.33%	109
35-1012	First-Line Supervisors Managers of Food Preparation and Serving Workers	12,242	14,294	2,052	1.56%	514
35-2011	Cooks, Fast Food	8,445	8,739	294	0.34%	270
35-2012	Cooks, Institution and Cafeteria	6,682	7,331	649	0.93%	255
35-2013	Cooks, Private Household	2	3	1	4.14%	0
35-2014	Cooks, Restaurant	9,369	11,705	2,336	2.25%	500
35-2015	Cooks, Short Order	2,500	2,788	288	1.10%	100
35-2021	Food Preparation Workers	11,772	14,543	2,771	2.14%	731
35-3011	Bartenders	6,058	7,042	984	1.52%	338
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	38,959	52,881	13,922	3.10%	3,778
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	6,289	7,484	1,195	1.75%	607
35-3031	Waiters and Waitresses	31,932	38,855	6,923	1.98%	2,489
35-3041	Food Servers, Nonrestaurant	3,989	4,878	889	2.03%	266
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	8,952	8,584	-368	-0.42%	301
35-9021	Dishwashers	8,817	8,344	-473	-0.55%	331
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	5,219	6,111	892	1.59%	245
35-9099	Food Preparation and Serving Related Workers, All Other	3,917	3,772	-145	-0.38%	147
37-0000	Building and Grounds, Cleaning and Maintenance Occupations	113,888	132,216	18,328	1.50%	4,124
37-1011	First-Line Supervisors Managers of Housekeeping and Janitorial Workers	8,913	9,854	941	1.01%	336
37-1012	First-Line Supervisors Managers of Landscaping, Lawn Service, and Groundskeeping Workers	4,288	4,668	380	0.85%	62
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	58,374	64,524	6,150	1.01%	1,670
37-2012	Maids and Housekeeping Cleaners	22,594	28,078	5,484	2.20%	1,039
37-2021	Pest Control Workers	774	897	123	1.49%	28
37-3011	Landscaping and Groundskeeping Workers	15,944	20,574	4,630	2.58%	863
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	497	575	78	1.47%	20
37-3013	Tree Trimmers and Pruners	466	527	61	1.24%	18
37-3019	Grounds Maintenance Workers, All Other	8	9	1	1.18%	0
37-9099	Building and Grounds Cleaning and Maintenance Workers, All Other (OES Only)	2,037	2,510	473	2.11%	88
39-0000	Personal Care and Service Occupations	77,690	95,268	17,578	2.06%	3,974
39-1011	Gaming Supervisors	***	***	***	***	***

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
39-1012	Slot Key Persons	***	***	***	***	***
39-1021	First-Line Supervisors					
	Managers of Personal Service Workers	2,981	3,623	642	1.97%	147
39-2011	Animal Trainers	263	309	46	1.62%	10
39-2021	Nonfarm Animal Caretakers	4,293	5,134	841	1.81%	175
39-3011	Gaming Dealers	***	***	***	***	***
39-3012	Gaming and Sports Book Writers and Runners	***	***	***	***	***
39-3021	Motion Picture Projectionists	75	52	-23	-3.60%	2
39-3031	Ushers, Lobby Attendants, and Ticket Takers	2,348	2,796	448	1.76%	233
39-3091	Amusement and Recreation Attendants	2,833	3,821	988	3.04%	194
39-3092	Costume Attendants	18	25	7	3.34%	1
39-3093	Locker Room, Coatroom, and Dressing Room Attend	4,341	4,734	393	0.87%	176
39-3099	Entertainment Attendants and Related Workers, All Other	***	***	***	***	***
39-3199	Gaming Workers, All Other (OES Only)	***	***	***	***	***
39-4011	Embalmers	71	61	-10	-1.51%	2
39-4021	Funeral Attendants	205	218	13	0.62%	6
39-5011	Barbers	2,128	2,298	170	0.77%	78
39-5012	Hairdressers, Hairstylists, and Cosmetologists	13,993	15,335	1,342	0.92%	476
39-5091	Makeup Artists, Theatrical and Performance	3	3	0	0.00%	0
39-5092	Manicurists and Pedicurists	1,615	2,027	412	2.30%	81
39-5093	Shampooers	2,881	3,174	293	0.97%	100
39-5094	Skin Care Specialists	705	777	72	0.98%	24
39-6011	Baggage Porters and Bellhops	2,283	2,537	254	1.06%	104
39-6012	Concierges	650	749	99	1.43%	32
39-6021	Tour Guides and Escorts	610	642	32	0.51%	22
39-6022	Travel Guides	48	47	-1	-0.21%	2
39-6031	Flight Attendants	***	***	***	***	***
39-6032	Transportation Attendants, Except Flight Attendants and Baggage Porters	368	477	109	2.63%	24
39-9011	Child Care Workers	9,046	12,430	3,384	3.23%	645
39-9021	Personal and Home Care Aides	3,401	4,962	1,561	3.85%	208
39-9031	Fitness Trainers and Aerobics Instructors	4,365	6,509	2,144	4.08%	305
39-9032	Recreation Workers	7,808	9,689	1,881	2.18%	350
39-9041	Residential Advisors	1,244	1,599	355	2.54%	64
39-9099	Personal Care and Service Workers, All Other	3,429	4,327	898	2.35%	194
41-0000	Sales and Related Occupations	280,058	317,203	37,145	1.25%	12,478
41-1011	First-Line Supervisors					
	Managers of Retail Sales Workers	39,092	43,721	4,629	1.13%	1,027
41-1012	First-Line Supervisors					
	Managers of Non-Retail Sales Workers	7,963	8,564	601	0.73%	178
41-2011	Cashiers	59,600	70,740	11,140	1.73%	3,818
41-2012	Gaming Change Persons and Booth Cashiers	***	***	***	***	***
41-2021	Counter and Rental Clerks	7,159	8,332	1,173	1.53%	441
41-2022	Parts Salespersons	3,398	3,125	-273	-0.83%	101
41-2031	Retail Salespersons	78,180	89,067	10,887	1.31%	4,062
41-3011	Advertising Sales Agents	3,410	4,426	1,016	2.64%	171

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
41-3021	Insurance Sales Agents	5,395	5,709	314	0.57%	169
41-3031	Securities, Commodities, and Financial Services Sales Agents	3,967	4,705	738	1.72%	106
41-3041	Travel Agents	3,082	2,978	-104	-0.34%	75
41-3099	Sales Representatives, Services, All Other	2,124	2,492	368	1.61%	84
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	7,232	7,247	15	0.02%	198
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	17,455	18,630	1,175	0.65%	592
41-9011	Demonstrators and Product Promoters	1,512	1,652	140	0.89%	63
41-9012	Models	21	21	0	0.00%	1
41-9021	Real Estate Brokers	1,890	2,033	143	0.73%	47
41-9022	Real Estate Sales Agents	7,091	7,630	539	0.74%	177
41-9031	Sales Engineers	2,871	3,210	339	1.12%	108
41-9041	Telemarketers	11,700	12,838	1,138	0.93%	355
41-9091	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers	3,128	3,416	288	0.88%	109
41-9099	Sales and Related Workers, All Other	13,609	16,387	2,778	1.87%	578
43-0000	Office and Administrative Support Occupations	547,365	580,571	33,206	0.59%	16,172
43-1011	First-Line Supervisors Managers of Office and Administrative Support Workers	32,380	34,712	2,332	0.70%	859
43-2011	Switchboard Operators, Including Answering Service	3,734	2,946	-788	-2.34%	110
43-2021	Telephone Operators	3,175	2,143	-1,032	-3.85%	94
43-2099	Communications Equipment Operators, All Other	1,274	967	-307	-2.72%	42
43-3011	Bill and Account Collectors	8,016	9,816	1,800	2.05%	380
43-3021	Billing and Posting Clerks and Machine Operators	7,146	7,898	752	1.01%	250
43-3031	Bookkeeping, Accounting, and Auditing Clerks	30,841	32,801	1,960	0.62%	781
43-3051	Payroll and Timekeeping Clerks	3,329	3,428	99	0.29%	106
43-3061	Procurement Clerks	2,116	1,862	-254	-1.27%	48
43-3071	Tellers	9,610	8,611	-999	-1.09%	462
43-4011	Brokerage Clerks	512	454	-58	-1.20%	7
43-4021	Correspondence Clerks	695	724	29	0.41%	23
43-4031	Court, Municipal, and License Clerks	797	818	21	0.26%	15
43-4041	Credit Authorizers, Checkers, and Clerks	2,088	2,095	7	0.03%	20
43-4051	Customer Service Representatives	37,324	47,991	10,667	2.55%	1,383
43-4061	Eligibility Interviewers, Government Programs	648	571	-77	-1.26%	19
43-4071	File Clerks	5,264	5,462	198	0.37%	188
43-4081	Hotel, Motel, and Resort Desk Clerks	3,653	4,995	1,342	3.18%	294
43-4111	Interviewers, Except Eligibility and Loan	3,516	4,220	704	1.84%	145
43-4121	Library Assistants, Clerical	2,365	3,116	751	2.80%	180
43-4131	Loan Interviewers and Clerks	2,574	1,884	-690	-3.07%	18

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
43-4141	New Accounts Clerks	1,031	1,180	149	1.36%	37
43-4151	Order Clerks	4,374	3,489	-885	-2.24%	92
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	5,631	6,256	625	1.06%	190
43-4171	Receptionists and Information Clerks	27,932	33,212	5,280	1.75%	1,143
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	4,175	4,791	616	1.39%	174
43-4199	Information and Record Clerks, All Other	122	117	-5	-0.42%	2
43-4999	Financial, Information, and Record Clerks, All Other (OES Only)	5,031	5,797	766	1.43%	142
43-5011	Cargo and Freight Agents	665	647	-18	-0.27%	13
43-5021	Couriers and Messengers	1,901	1,751	-150	-0.82%	52
43-5031	Police, Fire, and Ambulance Dispatchers	1,054	1,158	104	0.95%	28
43-5032	Dispatchers, Except Police, Fire, and Ambulance	2,821	3,231	410	1.37%	87
43-5041	Meter Readers, Utilities	622	469	-153	-2.78%	15
43-5051	Postal Service Clerks	3,337	3,411	74	0.22%	80
43-5052	Postal Service Mail Carriers	11,349	11,580	231	0.20%	367
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	12,543	12,347	-196	-0.16%	274
43-5061	Production, Planning, and Expediting Clerks	3,648	4,183	535	1.38%	115
43-5071	Shipping, Receiving, and Traffic Clerks	10,573	11,586	1,013	0.92%	314
43-5081	Stock Clerks and Order Fillers	29,377	31,487	2,110	0.70%	1,256
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	1,200	1,562	362	2.67%	65
43-5199	Material Recording, Scheduling, Dispatching, and Distributing Workers, All Other (OES Only)	1,296	1,402	106	0.79%	57
43-6011	Executive Secretaries and Administrative Assistants	40,421	44,081	3,660	0.87%	1,053
43-6012	Legal Secretaries	13,664	16,394	2,730	1.84%	505
43-6013	Medical Secretaries	6,443	8,066	1,623	2.27%	272
43-6014	Secretaries, Except Legal, Medical, and Executive	54,663	52,258	-2,405	-0.45%	929
43-9011	Computer Operators	6,785	5,466	-1,319	-2.14%	121
43-9021	Data Entry Keyers	13,587	13,198	-389	-0.29%	215
43-9022	Word Processors and Typists	9,500	7,431	-2,069	-2.43%	192
43-9031	Desktop Publishers	985	1,743	758	5.87%	93
43-9041	Insurance Claims and Policy Processing Clerks	3,584	2,934	-650	-1.98%	62
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	8,233	8,140	-93	-0.11%	240
43-9061	Office Clerks, General	47,100	54,648	7,548	1.50%	1,659
43-9071	Office Machine Operators, Except Computer	2,252	1,791	-461	-2.26%	79
43-9081	Proofreaders and Copy Markers	965	915	-50	-0.53%	35
43-9111	Statistical Assistants	655	645	-10	-0.15%	6
43-9199	Office and Administrative Support Workers, All Other	49	46	-3	-0.63%	1
43-9999	Secretaries, Administrative Assistants, and Other Office Support Workers, All Other (OES Only)	48,720	45,645	-3,075	-0.65%	783
45-0000	Farming, Fishing, and Forestry Occupations	4,890	5,614	724	1.39%	190

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
45-1010	First-Line Supervisors Managers of Farming, Fishing, and Forestry Workers	334	407	73	2.00%	15
45-2011	Agricultural Inspectors	126	125	-1	-0.08%	3
45-2021	Animal Breeders	24	30	6	2.26%	2
45-2041	Graders and Sorters, Agricultural Products	45	43	-2	-0.45%	1
45-2091	Agricultural Equipment Operators	***	***	***	***	***
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	487	595	108	2.02%	19
45-2093	Farmworkers, Farm and Ranch Animals	398	474	76	1.76%	14
45-2099	Agricultural Workers, All Other	1,514	1,731	217	1.35%	72
45-3010	Fishers and Related Fishing Workers	66	85	19	2.56%	4
45-4011	Forest and Conservation Workers	89	91	2	0.22%	2
45-4021	Fallers	44	49	5	1.08%	1
45-4022	Logging Equipment Operators	66	80	14	1.94%	3
45-4023	Log Graders and Scalers	13	15	2	1.44%	1
45-9099	Farming, Fishing, and Forestry Workers, All Other (OES Only)	1,518	1,693	175	1.10%	44
47-0000	Construction and Extraction Occupations	143,941	165,518	21,577	1.41%	5,076
47-1011	First-Line Supervisors Managers of Construction Trades and Extraction Workers	18,668	20,974	2,306	1.17%	657
47-2011	Boilermakers	447	458	11	0.24%	13
47-2021	Brickmasons and Blockmasons	2,766	3,171	405	1.38%	92
47-2022	Stonemasons	508	621	113	2.03%	21
47-2031	Carpenters	17,979	19,809	1,830	0.97%	487
47-2041	Carpet Installers	1,049	1,069	20	0.19%	20
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	352	394	42	1.13%	10
47-2043	Floor Sanders and Finishers	434	460	26	0.58%	10
47-2044	Tile and Marble Setters	1,182	1,329	147	1.18%	35
47-2051	Cement Masons and Concrete Finishers	2,680	2,794	114	0.42%	34
47-2053	Terrazzo Workers and Finishers	***	***	***	***	***
47-2061	Construction Laborers	20,316	24,148	3,832	1.74%	569
47-2071	Paving, Surfacing, and Tamping Equipment Operators	535	619	84	1.47%	19
47-2072	Pile-Driver Operators	***	***	***	***	***
47-2073	Operating Engineers and Other Construction Equipment Operators	3,503	3,880	377	1.03%	114
47-2081	Drywall and Ceiling Tile Installers	2,789	3,216	427	1.43%	69
47-2082	Tapers	303	350	47	1.45%	8
47-2111	Electricians	16,299	19,564	3,265	1.84%	631
47-2121	Glaziers	862	961	99	1.09%	26
47-2130	Insulation Workers	989	1,221	232	2.13%	53
47-2141	Painters, Construction and Maintenance	11,603	12,982	1,379	1.13%	342
47-2142	Paperhangers	824	916	92	1.06%	25
47-2151	Pipelayers	1,378	1,676	298	1.98%	53
47-2152	Plumbers, Pipefitters, and Steamfitters	9,943	11,550	1,607	1.51%	325

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
47-2161	Plasterers and Stucco Masons	1,149	1,328	179	1.46%	39
47-2171	Reinforcing Iron and Rebar Workers	531	605	74	1.31%	13
47-2181	Roofers	1,556	1,829	273	1.63%	63
47-2211	Sheet Metal Workers	4,260	5,868	1,608	3.25%	249
47-2221	Structural Iron and Steel Workers	1,009	1,188	179	1.65%	29
47-3011	Helpers-Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	2,664	3,121	457	1.60%	178
47-3012	Helpers-Carpenters	1,493	1,560	67	0.44%	81
47-3013	Helpers-Electricians	2,034	2,314	280	1.30%	129
47-3014	Helpers-Painters, Paperhangers, Plasterers, and Stucco Masons	543	629	86	1.48%	36
47-3015	Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters	1,738	2,072	334	1.77%	120
47-3016	Helpers-Roofers	629	779	150	2.16%	46
47-3019	Helpers, Construction Trades, All Other	1,400	1,729	329	2.13%	102
47-4011	Construction and Building Inspectors	2,235	2,359	124	0.54%	63
47-4021	Elevator Installers and Repairers	1,882	2,121	239	1.20%	85
47-4031	Fence Erectors	231	250	19	0.79%	6
47-4041	Hazardous Materials Removal Workers	676	832	156	2.10%	36
47-4051	Highway Maintenance Workers	1,433	1,232	-201	-1.50%	22
47-4061	Rail-Track Laying and Maintenance Equipment Operators	***	***	***	***	***
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	90	95	5	0.54%	3
47-4091	Segmental Pavers	11	13	2	1.68%	0
47-4999	Construction Trades and Related Workers, All Other (OES Only)	2,215	2,599	384	1.61%	137
47-5012	Rotary Drill Operators, Oil and Gas	***	***	***	***	***
47-5013	Service Unit Operators, Oil, Gas, and Mining	***	***	***	***	***
47-5021	Earth Drillers, Except Oil and Gas	289	336	47	1.52%	10
47-5031	Explosives Workers, Ordnance Handling Experts, and Blasters	81	87	6	0.72%	3
47-5041	Continuous Mining Machine Operators	***	***	***	***	***
47-5042	Mine Cutting and Channeling Machine Operators	***	***	***	***	***
47-5051	Rock Splitters, Quarry	***	***	***	***	***
47-5071	Roustabouts, Oil and Gas	***	***	***	***	***
47-5081	Helpers-Extraction Workers	96	95	-1	-0.10%	4
47-5099	Extraction Workers, All Other	3	3	0	0.00%	0
49-0000	Installation, Maintenance, and Repair Occupations	100,061	113,955	13,894	1.31%	3,543
49-1011	First-Line Supervisors Managers of Mechanics, Installers, and Repairers	8,597	10,266	1,669	1.79%	390
49-2011	Computer, Automated Teller, and Office Machine Repairers	2,345	2,468	123	0.51%	38
49-2021	Radio Mechanics	664	715	51	0.74%	18
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	6,001	6,213	212	0.35%	134
49-2091	Avionics Technicians	143	170	27	1.74%	6

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
49-2092	Electric Motor, Power Tool, and Related Repairers	480	489	9	0.19%	12
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	***	***	***	***	***
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	1,442	1,581	139	0.92%	43
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	379	414	35	0.89%	11
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	151	181	30	1.83%	7
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	309	240	-69	-2.50%	6
49-2098	Security and Fire Alarm Systems Installers	1,432	1,619	187	1.23%	45
49-2099	Electrical and Electronic Equipment Mechanics, Installers, and Repairers, All Other (OES Only)	848	1,008	160	1.74%	36
49-3011	Aircraft Mechanics and Service Technicians	1,474	1,738	264	1.66%	58
49-3021	Automotive Body and Related Repairers	2,850	3,417	567	1.83%	127
49-3022	Automotive Glass Installers and Repairers	1,019	1,227	208	1.87%	46
49-3023	Automotive Service Technicians and Mechanics	16,130	19,009	2,879	1.66%	668
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	2,075	2,411	336	1.51%	87
49-3041	Farm Equipment Mechanics	292	270	-22	-0.78%	8
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	1,012	1,129	117	1.10%	38
49-3043	Rail Car Repairers	1	1	0	0.00%	0
49-3051	Motorboat Mechanics	167	164	-3	-0.18%	4
49-3052	Motorcycle Mechanics	270	325	55	1.87%	12
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	596	615	19	0.31%	17
49-3091	Bicycle Repairers	311	386	75	2.18%	19
49-3092	Recreational Vehicle Service Technicians	52	56	4	0.74%	2
49-3093	Tire Repairers and Changers	1,401	1,266	-135	-1.01%	54
49-3099	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers, All Other (OES Only)	636	768	132	1.90%	38
49-9011	Mechanical Door Repairers	152	153	1	0.07%	5
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	418	445	27	0.63%	16
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	5,884	7,341	1,457	2.24%	207
49-9031	Home Appliance Repairers	604	666	62	0.98%	19
49-9041	Industrial Machinery Mechanics	926	1,021	95	0.98%	34
49-9042	Maintenance and Repair Workers, General	19,705	20,461	756	0.38%	332
49-9043	Maintenance Workers, Machinery	969	1,093	124	1.21%	39
49-9044	Millwrights	238	258	20	0.81%	9
49-9045	Refractory Materials Repairers, Except Brickmasons	66	75	9	1.29%	2
49-9051	Electrical Power-Line Installers and Repairers	2,078	2,581	503	2.19%	118
49-9052	Telecommunications Line Installers and Repairers	3,783	4,820	1,037	2.45%	175
49-9061	Camera and Photographic Equipment Repairers	272	253	-19	-0.72%	7
49-9062	Medical Equipment Repairers	373	406	33	0.85%	13
49-9063	Musical Instrument Repairers and Tuners	186	208	22	1.12%	7

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
49-9064	Watch Repairers	28	41	13	3.89%	2
49-9069	Precision Instrument and Equipment Repairers, All Other	332	367	35	1.01%	12
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	342	408	66	1.78%	14
49-9092	Commercial Divers	***	***	***	***	***
49-9093	Fabric Menders, Except Garment	18	20	2	1.06%	1
49-9094	Locksmiths and Safe Repairers	802	855	53	0.64%	31
49-9095	Manufactured Building and Mobile Home Installers	18	20	2	1.06%	1
49-9096	Riggers	230	265	35	1.43%	8
49-9098	Helpers-Installation, Maintenance, and Repair Workers	2,684	3,241	557	1.90%	192
49-9099	Installation, Maintenance, and Repair Workers, All Other	8,785	10,697	1,912	1.99%	371
51-0000	Production Occupations	80,900	87,798	6,898	0.82%	2,697
51-1011	First-Line Supervisors					
	Managers of Production and Operating Workers	5,969	6,260	291	0.48%	185
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	96	109	13	1.28%	4
51-2021	Coil Winders, Tapers, and Finishers	246	317	71	2.57%	13
51-2022	Electrical and Electronic Equipment Assemblers	2,547	2,372	-175	-0.71%	65
51-2023	Electromechanical Equipment Assemblers	282	314	32	1.08%	10
51-2031	Engine and Other Machine Assemblers	143	137	-6	-0.43%	3
51-2041	Structural Metal Fabricators and Fitters	629	791	162	2.32%	26
51-2091	Fiberglass Laminators and Fabricators	***	***	***	***	***
51-2092	Team Assemblers	7,065	7,830	765	1.03%	200
51-2093	Timing Device Assemblers, Adjusters, and Calibrators	***	***	***	***	***
51-2099	Assemblers and Fabricators, All Other	2,519	2,755	236	0.90%	68
51-3011	Bakers	3,124	3,858	734	2.13%	123
51-3021	Butchers and Meat Cutters	1,648	1,594	-54	-0.33%	40
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	537	560	23	0.42%	15
51-3023	Slaughterers and Meat Packers	17	15	-2	-1.24%	0
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	72	55	-17	-2.66%	2
51-3092	Food Batchmakers	200	146	-54	-3.10%	5
51-3093	Food Cooking Machine Operators and Tenders	314	347	33	1.00%	9
51-3099	Food Processing Workers, All Other (OES Only)	764	724	-40	-0.54%	19
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	221	250	29	1.24%	11
51-4012	Numerical Tool and Process Control Programmers	41	48	7	1.59%	2
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	452	470	18	0.39%	12
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	***	***	***	***	***
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	71	84	13	1.70%	4
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	733	705	-28	-0.39%	14

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	127	121	-6	-0.48%	4
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	254	248	-6	-0.24%	6
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	59	49	-10	-1.84%	2
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	39	39	0	0.00%	1
51-4041	Machinists	1,402	1,550	148	1.01%	44
51-4051	Metal-Refining Furnace Operators and Tenders	94	95	1	0.11%	3
51-4052	Pourers and Casters, Metal	36	32	-4	-1.17%	1
51-4061	Model Makers, Metal and Plastic	17	19	2	1.12%	1
51-4062	Patternmakers, Metal and Plastic	19	22	3	1.48%	1
51-4071	Foundry Mold and Coremakers	68	37	-31	-5.90%	1
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	151	177	26	1.60%	6
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	421	444	23	0.53%	9
51-4111	Tool and Die Makers	61	61	0	0.00%	2
51-4121	Welders, Cutters, Solderers, and Brazers	1,821	2,270	449	2.23%	96
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	143	144	1	0.07%	4
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	59	64	5	0.82%	2
51-4192	Lay-Out Workers, Metal and Plastic	75	87	12	1.50%	3
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	292	276	-16	-0.56%	6
51-4194	Tool Grinders, Filers, and Sharpeners	12	12	0	0.00%	0
51-4199	Metal Workers and Plastic Workers, All Other	607	691	84	1.30%	20
51-5011	Bindery Workers	2,773	3,013	240	0.83%	97
51-5012	Bookbinders	401	480	79	1.81%	19
51-5021	Job Printers	1,261	1,435	174	1.30%	49
51-5022	Prepress Technicians and Workers	2,648	2,374	-274	-1.09%	65
51-5023	Printing Machine Operators	4,200	4,567	367	0.84%	143
51-5099	Printing Workers, All Other (OES Only)	272	298	26	0.92%	10
51-6011	Laundry and Dry-Cleaning Workers	4,286	5,055	769	1.66%	190
51-6021	Pressers, Textile, Garment, and Related Materials	1,347	1,472	125	0.89%	31
51-6031	Sewing Machine Operators	900	1,058	158	1.63%	25
51-6041	Shoe and Leather Workers and Repairers	204	178	-26	-1.35%	8
51-6042	Shoe Machine Operators and Tenders	***	***	***	***	***
51-6051	Sewers, Hand	46	51	5	1.04%	2
51-6052	Tailors, Dressmakers, and Custom Sewers	908	816	-92	-1.06%	20
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	***	***	***	***	***
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	***	***	***	***	***

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	17	23	6	3.07%	1
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	9	8	-1	-1.17%	0
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	11	15	4	3.15%	1
51-6092	Fabric and Apparel Patternmakers	***	***	***	***	***
51-6093	Upholsterers	429	381	-48	-1.18%	14
51-6099	Textile, Apparel, and Furnishings Workers, All Other	431	546	115	2.39%	20
51-7011	Cabinetmakers and Bench Carpenters	1,209	1,485	276	2.08%	66
51-7021	Furniture Finishers	455	542	87	1.77%	27
51-7031	Model Makers, Wood	***	***	***	***	***
51-7032	Patternmakers, Wood	***	***	***	***	***
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	175	238	63	3.12%	13
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	314	415	101	2.83%	23
51-7099	Woodworkers, All Other	232	264	32	1.30%	13
51-8012	Power Distributors and Dispatchers	107	106	-1	-0.09%	3
51-8013	Power Plant Operators	550	629	79	1.35%	24
51-8021	Stationary Engineers and Boiler Operators	1,314	1,290	-24	-0.18%	37
51-8031	Water and Liquid Waste Treatment Plant and System Operators	1,253	1,582	329	2.36%	72
51-8091	Chemical Plant and System Operators	452	443	-9	-0.20%	14
51-8092	Gas Plant Operators	***	***	***	***	***
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	18	19	1	0.54%	1
51-8099	Plant and System Operators, All Other	932	1,081	149	1.49%	43
51-9011	Chemical Equipment Operators and Tenders	151	167	16	1.01%	5
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	134	146	12	0.86%	4
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	85	99	14	1.54%	3
51-9022	Grinding and Polishing Workers, Hand	71	84	13	1.70%	3
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	224	254	30	1.26%	8
51-9031	Cutters and Trimmers, Hand	***	***	***	***	***
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	546	606	60	1.05%	16
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	571	715	144	2.27%	27
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	167	220	53	2.79%	10

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	3,931	3,958	27	0.07%	89
51-9071	Jewelers and Precious Stone and Metal Workers	122	140	18	1.39%	5
51-9081	Dental Laboratory Technicians	503	499	-4	-0.08%	14
51-9082	Medical Appliance Technicians	100	123	23	2.09%	5
51-9083	Ophthalmic Laboratory Technicians	***	***	***	***	***
51-9111	Packaging and Filling Machine Operators and Tenders	1,102	1,234	132	1.14%	38
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	189	245	56	2.63%	10
51-9122	Painters, Transportation Equipment	409	497	88	1.97%	18
51-9123	Painting, Coating, and Decorating Workers	799	923	124	1.45%	30
51-9131	Photographic Process Workers	844	745	-99	-1.24%	22
51-9132	Photographic Processing Machine Operators	1,366	1,348	-18	-0.13%	36
51-9141	Semiconductor Processors	***	***	***	***	***
51-9191	Cementing and Gluing Machine Operators and Tenders	***	***	***	***	***
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	35	36	1	0.28%	1
51-9194	Etchers and Engravers	210	197	-13	-0.64%	5
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	165	132	-33	-2.21%	4
51-9196	Paper Goods Machine Setters, Operators, and Tenders	617	580	-37	-0.62%	12
51-9197	Tire Builders	***	***	***	***	***
51-9198	Helpers-Production Workers	2,964	3,279	315	1.02%	106
51-9199	Production Workers, All Other	3,455	3,767	312	0.87%	93
53-0000	Transportation and Materials Moving Occupations	136,985	156,741	19,756	1.36%	5,218
53-1011	Aircraft Cargo Handling Supervisors	276	335	59	1.96%	12
53-1021	First-Line Supervisors Managers of Helpers, Laborers, and Material Movers, Hand	2,073	2,424	351	1.58%	80
53-1031	First-Line Supervisors Managers of Transportation and Material-Moving Machine and Vehicle Operators	3,234	3,827	593	1.70%	129
53-2011	Airline Pilots, Copilots, and Flight Engineers	3,587	3,904	317	0.85%	114
53-2012	Commercial Pilots	133	166	33	2.24%	6
53-2021	Air Traffic Controllers	1,091	1,286	195	1.66%	66
53-2022	Airfield Operations Specialists	***	***	***	***	***
53-2099	Air Transportation Workers, All Other (OES Only)	150	173	23	1.44%	9
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	231	333	102	3.72%	12
53-3021	Bus Drivers, Transit and Intercity	2,613	3,669	1,056	3.45%	172
53-3022	Bus Drivers, School	8,660	9,555	895	0.99%	310
53-3031	Driver/Sales Workers	8,568	9,499	931	1.04%	211

Appendix (cont.)

Appendix Table 4 – PMSA Occupational Detail (cont.)

SOC	Occupational Title	2000	2010	Growth	Growth Rate	Annual Openings
53-3032	Truck Drivers, Heavy and Tractor-Trailer	14,104	16,009	1,905	1.27%	384
53-3033	Truck Drivers, Light or Delivery Services	22,679	26,719	4,040	1.65%	716
53-3041	Taxi Drivers and Chauffeurs	3,334	4,360	1,026	2.72%	130
53-3099	Motor Vehicle Operators, All Other	3,300	3,730	430	1.23%	99
53-4011	Locomotive Engineers	***	***	***	***	***
53-4012	Locomotive Firers	***	***	***	***	***
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	9	10	1	1.06%	1
53-4031	Railroad Conductors and Yardmasters	297	412	115	3.33%	25
53-4099	Rail Transportation Workers, All Other	687	789	102	1.39%	34
53-5011	Sailors and Marine Oilers	55	88	33	4.81%	5
53-5021	Captains, Mates, and Pilots of Water Vessels	***	***	***	***	***
53-5022	Motorboat Operators	3	3	0	0.00%	0
53-5031	Ship Engineers	***	***	***	***	***
53-5099	Water Transportation Workers, All Other (OES Only)	***	***	***	***	***
53-6011	Bridge and Lock Tenders	***	***	***	***	***
53-6021	Parking Lot Attendants	3,049	3,632	583	1.77%	110
53-6031	Service Station Attendants	1,418	1,559	141	0.95%	86
53-6041	Traffic Technicians	212	205	-7	-0.34%	8
53-6051	Transportation Inspectors	448	462	14	0.31%	13
53-6099	Transportation Workers, All Other	505	619	114	2.06%	31
53-7011	Conveyor Operators and Tenders	542	696	154	2.53%	31
53-7021	Crane and Tower Operators	514	581	67	1.23%	22
53-7031	Dredge Operators	***	***	***	***	***
53-7032	Excavating and Loading Machine and Dragline Operators	1,342	1,706	364	2.43%	76
53-7033	Loading Machine Operators, Underground Mining	***	***	***	***	***
53-7041	Hoist and Winch Operators	***	***	***	***	***
53-7051	Industrial Truck and Tractor Operators	5,708	6,525	817	1.35%	161
53-7061	Cleaners of Vehicles and Equipment	6,420	7,477	1,057	1.54%	351
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	29,020	31,846	2,826	0.93%	1,252
53-7063	Machine Feeders and Offbearers	758	688	-70	-0.96%	26
53-7064	Packers and Packagers, Hand	6,898	7,969	1,071	1.45%	283
53-7071	Gas Compressor and Gas Pumping Station Operators	***	***	***	***	***
53-7072	Pump Operators, Except Wellhead Pumpers	37	44	7	1.75%	2
53-7081	Refuse and Recyclable Material Collectors	2,595	2,725	130	0.49%	126
53-7121	Tank Car, Truck, and Ship Loaders	16	20	4	2.26%	1
53-7199	Material Moving Workers, All Other	1,113	1,315	202	1.68%	57

Appendix (cont.)

ⁱ **Notes on methodology for industry employment projections. The industry employment** projections were prepared using the Long Term Projections (LTP) Model, a product of the ALMIS Long-term Industry Projections Tools Consortium and the Utah Department of Workforce Services. The LTP model offers the forecaster a set of forecasting methodologies that have proved most useful in the making of industry employment projections in the past. It contains three basic types of models: shift share, time series and regression. We describe each in turn.

Shift share models decompose economic activity into three factors that explain differences in growth rates between different geographic areas. One is the influence of general economic conditions in a larger area of which the region is a part. A second is the competitive position that an area enjoys with respect to certain industries. A third is a result of an industry mix in an area's economy. Usually an area's economy is compared with a larger area of which it is a part. The LTP model incorporates eight types of shift share models including Constant Share, Constant Regional Rate, Implicit Shift Share and Classical Shift Share. These different models produce a range of outcomes, which is a useful attribute.

Time series analysis includes a range of techniques, only some of which are used in the LTP model. Not included in LTP are exponential smoothing, ARIMA, vector auto regression (VAR) and state space models, all of which are more appropriate for short-run projections using monthly data. Long term projections are generally done using annual data. The model focuses on four types of trends: linear, logarithmic, exponential and polynomial. These models describe regular patterns of growth or decline in employment at a constant, increasing or decreasing rate. More complex patterns cannot be modeled in LTP using time series models.

Regression models explain statistically the variations in employment over time using explanatory variables that are associated with these variations. The models are fitted to a base period for which the values of the explanatory variables are known and then projected using the base period equation together with projected values for the explanatory variables. The LTP model contains two sets of regression models: customized and predefined. The customized models enable the analyst to select a unique set of explanatory variables from those available that fits the data optimally. The predefined models provide the analyst with a more limited set of variables but include variables that have proved to be useful in projecting employment in the past. They enable the analyst to fit a regression model quickly and quite well, a very useful feature when nearly 300 industries have to be forecast for D.C. and over 400 for the PMSA. Because regression models require explanatory variables not only for the base period to which the model is fitted but also for the forecast period, some method of projecting explanatory variables is necessary. We have chosen to use Global Insight, formerly DRI-WEFA, as our source for explanatory variable forecasts. Global Insight has large macroeconomic models for the nation, states and metropolitan areas. Though no forecasting model is perfect, Global Insight has a good track record in its forecasts of the Washington area and is an excellent source for projections of this kind. Variables from Global Insight include the labor force, the unemployment rate, population, gross regional product, personal income, and total employment.

We generated a variety of employment projections for each industry using shift share, time series and regression models on LTP and then selected a single projection that we deemed the best of the lot. Criteria included model diagnostics, the relation of the projection to the historical series, as well as recent developments in the industry and the economy. In this way we generated employment projections for industry groups as well as two digit and three digit industries. We then aggregated our results on a spreadsheet, first comparing the three digit totals to the two digit values, the two digit totals to the industry totals and the industry totals with Global Insight's projected total employment. We subsequently adjusted the two digit and three digit industry results so that our results at the three digit, two digit, and industry levels were consistent. We followed the same procedure for D.C. and the PMSA.

Appendix (cont.)

ⁱⁱ **Notes on methodology for employment by occupation.** Employment by occupation is determined by the distribution of employment by industry. We prepared the occupational projections using the MicroMatrix Occupational Projections System. The MicroMatrix program, developed by the Utah Department of Workforce Services and used in most states, projects occupational employment from the projection of industry employment that proceeds it. MicroMatrix combines industry employment projections with Occupational Employment Survey (OES) data produced by each state annually. The D.C. and PMSA 2000-2010 projections use 1999 and 2000 survey data. MicroMatrix processing begins with loading the industry projections and OES data into the program. The OES data provide staffing patterns which show the distribution of jobs by occupation within an industry. For example, the legal services industry is staffed with several occupations: lawyers, court reporters, law clerks, paralegals, and legal secretaries, to name a few. If the legal services industry is expanding, then legal services employment will expand across the whole range of occupations employed in the industry. MicroMatrix allows users to create their own staffing patterns if they choose or to use national staffing patterns for industries included in the projections but not included in the OES survey.

Past staffing patterns are used to forecast occupational employment, but the program adjusts for projected changes in staffing patterns by using industry specific occupational change factors. For example, the base period staffing pattern in office and administrative support occupations in the federal government might change due to wider use of office automation technologies. In such a case past staffing patterns would need to be adjusted. The Bureau of Labor Statistics produces change factors for each occupation in each industry using national data. If the change factor for secretaries were less than one, the percentage of secretaries would decline in the occupational projections. The analyst can adjust national change factors to local conditions if that information is available to him. In another step, MicroMatrix estimates for self-employed, unpaid family workers and employees in private households from national patterns and local employment totals.

Using each state's industry projections, the program projects employment by occupation for each industry and aggregates them across industries to arrive at total projected employment by occupation. The end result is a comprehensive set of employment projections covering 647 occupations in the District and 767 in the PMSA.

ⁱⁱⁱ **Notes on growth rates:** The fastest growing occupations are those with the highest growth rates. Growth rate measures the forecasted annual percentage change from the base year 2000 to the projected year 2010. The rates reported in the tables are compound growth rates for the 10-year period. Since occupations with low employment totals start from a low base total, a small increase in an occupation's employment can result in a high growth rate. Conversely, an occupation with a high total for the base year 2000 could have a large increase in forecasted employment, but a small growth rate. Restricting the table to occupations with over 100 jobs reduces, but does not eliminate, this effect.

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Fred Siegmund was involved in the writing of this report from beginning to end. He prepared the initial draft from an outline provided to him, he prepared graphs, tables and exhibits, and he was entirely responsible for the section on occupational skill levels. He also contributed to reviewing and editing the draft. Responsibility for the final product, however, rests entirely with the lead author who made all final decisions about the numbers that are presented in this report. Any errors and omissions are also the responsibility of the lead author.

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